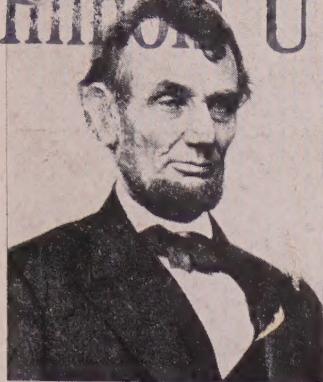


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ILLINOIS AGRICULTURIST

FARM AND HOME ISSUE

*MORRILL ACT —
which may provide Colleges
for the benefit of Agriculture —*



A. Lincoln.

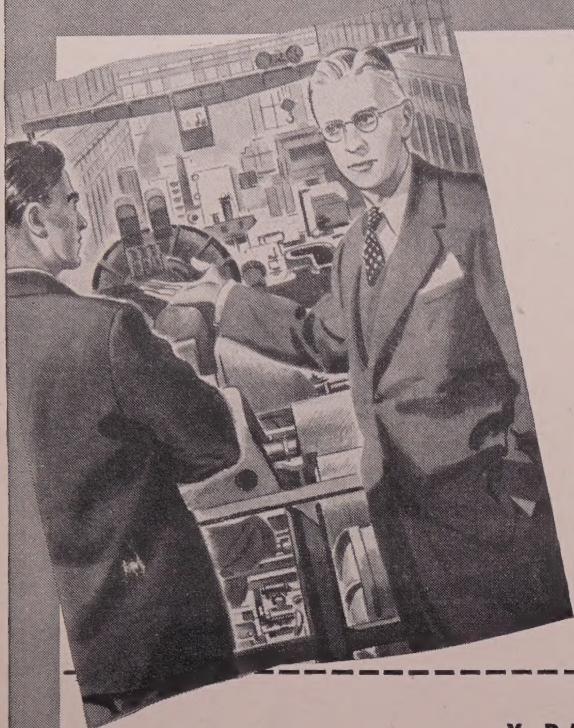
Fifty-Third Year

FEBRUARY, 1949

Member A.C.M.A.



CAREERS AT GENERAL ELECTRIC



General Electric is not one business, but an organization of many businesses, offering opportunities in virtually all the professions. Here three G-E men brief the career-possibilities which the company offers to the engineer, the x-ray specialist, and the business trainee.

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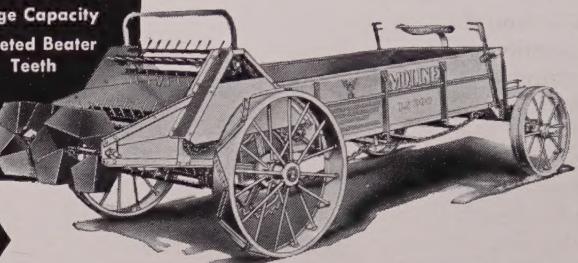
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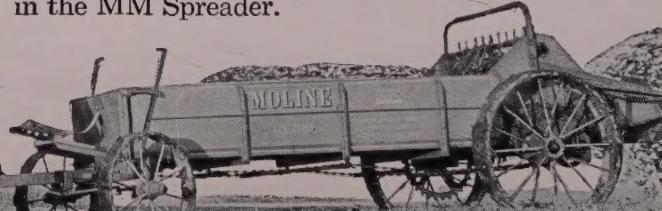
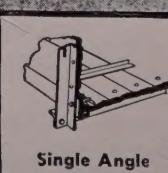
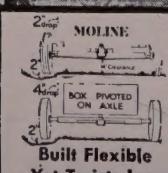
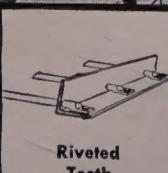
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THE ILLINOIS AGRICULTURIST

ESTABLISHED 1896

Member Agricultural College Magazines Associated

FEBRUARY, 1949

Volume LIII

Number 4

Published six times yearly by students in Agriculture and Home Economics at the University of Illinois

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OUR PLATFORM

To acquaint students and faculty in the College of Agriculture, agricultural leaders, and the rural people of Illinois with the latest scientific developments in agriculture and home economics.

To report events of general interest on the College of Agriculture campus.

To serve as a means of training agricultural and home economics students in journalism and business administration.

To promote the best interests of agricultural and home economics students on the campus of the University of Illinois.

PRESENTING OUR COLLEGE . . .

This issue of the Illinois Agriculturist is dedicated to you, our guests during this 48th annual Farm and Home week.

To assist you in becoming better acquainted with the facilities, services, and students of the College of Agriculture is our purpose. A special greeting from Dean H. P. Rusk sets the theme for this Farm and Home Week issue.

In this issue, we present each department of our college. Although their facilities and services may be very different, they all are working to produce a higher standard of farming and farm living. Our features covering the progress in the scientific phases of agriculture will interest many of you.

Representing our University at many national events are the intercollegiate judging teams. The aim of every ambitious agricultural student is to make one of these teams. In this issue, we show you the men, who by their hard work and good judgment, represented Illinois at the various national contests this past semester.

Many meetings and banquets are being held in conjunction with Farm and Home week. The calendar of special events in this issue will help keep you posted on which of these activities you'll want to attend.

The general sessions are the highlights of each day's program. You won't want to miss Mr. Charles B. Shuman when he addresses the general session on Thursday afternoon.

Mr. Shuman, a graduate of the College of Agriculture in 1928, is one of the outstanding farm leaders in America today. As president of the IAA he has urged that appropriations be made to build laboratories and buildings for veterinary medicine, agriculture, agricultural engineering, and home economics.

In this issue of the Agriculturist we present a broad picture of the College of Agriculture here on the University of Illinois campus. We hope that your visit to Farm and Home week will be more educational and more enjoyable with this copy of the Agriculturist in your possession.

Cover Acknowledgements: Picture of Lincoln, J. G. Randall, professor of history; aerial view of campus, department of aeronautics; art work by Paul Vogen and Don Hunter.

FACULTY ADVISORY BOARD

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Published six times during the year (October, November, December, February, March and May) by the Illini Publishing Company. Entered as second class matter at the Post Office at Urbana, Illinois, October 1, 1919, under the Act of March 3, 1879. Office, 118 David Kinley Hall, Urbana, Illinois, and 725 South Wright Street, Champaign, Illinois. Subscriptions, \$1.25 per year. Single copy, 25 cents. Reprint rights reserved by the Illinois Agriculturist.

Advertising rates sent on request
Address all mail to Illinois Agriculturist, Champaign, Illinois



Farm and Home Week Greetings

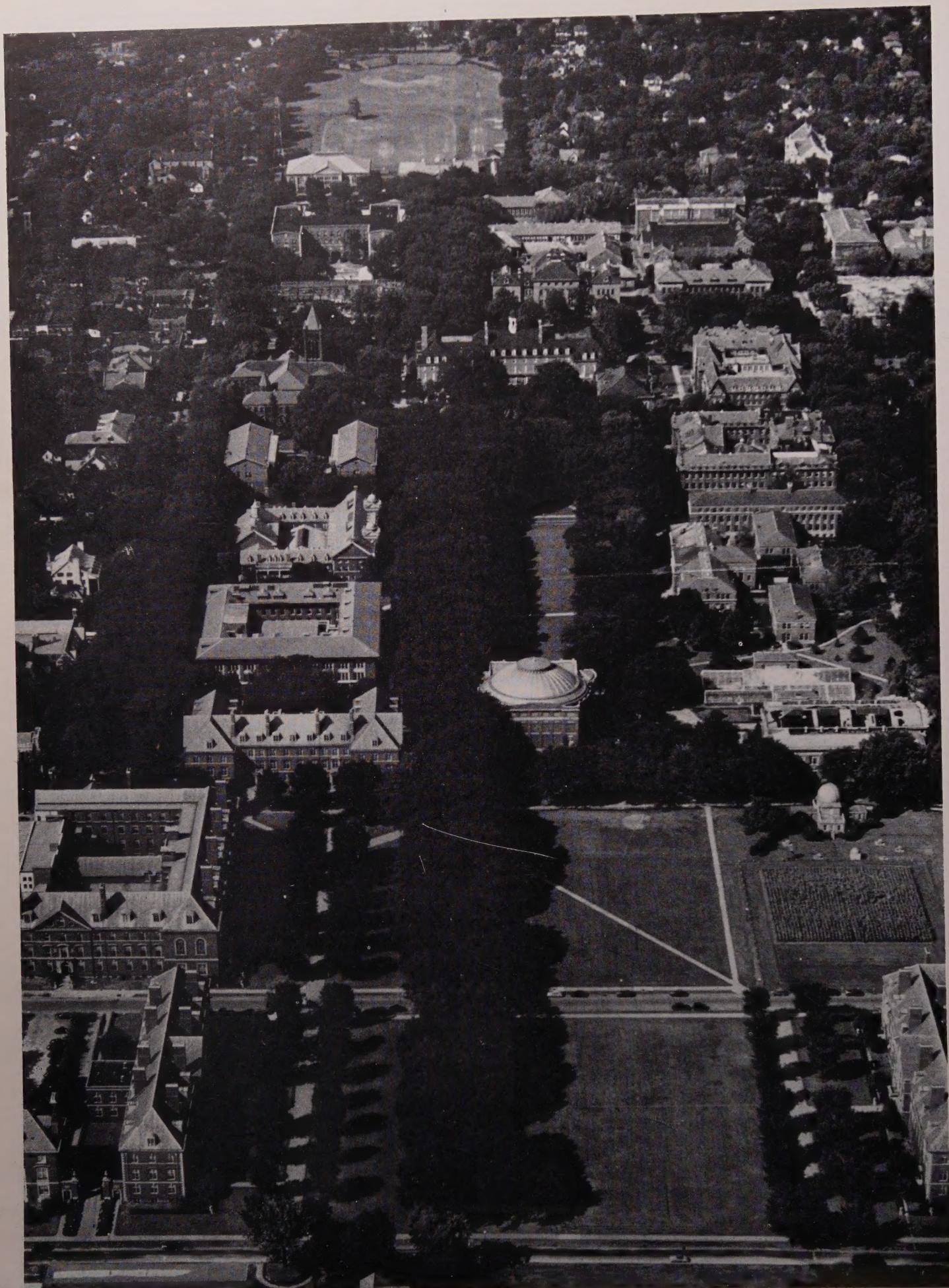


*F*AM HAPPY to use the pages of the Agriculturist to extend official greetings to our Farm and Home week guests. The program for this, the 48th annual event of this nature, is packed with authoritative discussions of problems of current interest to rural people. It maintains the high standard set by previous Farm and Home week programs.

This is not the first visit to the Illinois campus or the first Farm and Home week program for many of you. The farm people of Illinois have always shown a keen interest in their College of Agriculture, Experiment Station, and Extension Service. They appreciate the importance of the application of science to their business and recognize the contributions which it has made to more efficient methods of production. They are also aware of the fact that as a direct result of research and education, man lives better and longer, is healthier, and has within his reach more opportunities for happiness today than ever before in the history of the world.

If this is your first visit, you will be agreeably surprised by the vast facilities which are available here on the campus for sound information and superior training. All of these facilities are available to you during your visit, and the agriculture staff is eager to serve you in every way possible. We appreciate the interest your presence indicates and invite you to come again and again.

Dean and Director



Your Farm and Home Week

Special Events Calendar

MONDAY, JANUARY 31

Farm and Home Week Open House

8:00 p. m.—Illini Union

Illinois Christian Rural Fellowship

Dinner

5:30 p. m.—University YMCA. "Rural Church Strategy," Richard Comfort, Dubuque Theological Seminary, Dubuque, Iowa

Illinois Church Council Town and Country Committee Meeting

4:30 p. m.—University YMCA

Rural Youth Banquet

6:00 p. m.—University Place Christian Church, 403 South Wright Street, Champaign

TUESDAY, FEBRUARY 1

Illinois Home Bureau Federation

Annual Meeting

9:00 a. m.—Smith Memorial Hall

Home Economics Open House

11:45 a. m. to 12:45 p. m.; 4:30 p. m. to 5:30 p. m. Bevier Hall

Presbyterian Christian Rural Fellowship Dinner

5:00 p. m.—McKinley Foundation, 809 South Fifth Street, Champaign. For laymen and ministers

Rural Pastor's Conference

February 1-3, 314 Illini Union

4:30 p. m.—Vespers daily, Smith Memorial Hall

Stockmen's Banquet—E. T. Robbins'

Dinner

6:00 p. m.—Illini Union Ballroom; H. E. Kingman, Wyoming Hereford Ranch, Cheyenne, Wyoming

Egypt and Palestine in Color

8:00 p. m.—112 Gregory Hall, W. N. Stevenson

Recreation Round-up

8:45 p. m.—Lower Gym, Bevier Hall

WEDNESDAY, FEBRUARY 2

Film Hour

4:00 p. m.—Lincoln Hall Theater

Illinois Crop Improvement Association

Annual Banquet

6:30 p. m.—Lincoln Room, Urbana-Lincoln Hotel

Illinois Rural Life Conference

5:30 p. m.—Dinner, Latzer Hall, University YMCA

Music and Drama Festival

8:00 p. m.—Auditorium

THURSDAY, FEBRUARY 3

Illinois Turkey Growers Association

Banquet

6:30 p. m.—Latzer Hall, University YMCA

Farm Management Meeting

9:00 a. m.—Smith Memorial Hall; Luncheon, Illini Union Ballroom, 12:00 noon

Advisory Council for Agricultural Education

10:00 a. m.—128 Mumford Hall

General Session—Monday

3:00 p. m.—Auditorium

Dean H. P. Rusk, presiding

Music: Selected songs, Bruce Foote, baritone, Sherman Schoonmaker at the piano

Address: Education and World Peace—George D. Stoddard, President, University of Illinois

General Session—Tuesday

3:00 p. m.—Auditorium

W. L. Burlison, presiding

Address: A Preview of Progress—L. F. Livingston, Manager, Extension Division, E. I. DuPont de Nemours & Co.

General Session—Wednesday

3:00 p. m.—Auditorium

Mrs. Kathryn Van Aken Burns, presiding

Music: Selections from Music and Drama Festival

Address: Can We Strengthen Family Life? Pauline Park Wilson, Dean, School of Home Economics, University of Georgia, Athens, Georgia

General Session—Thursday

3:00 p. m.—Auditorium

J. C. Spitler, presiding

Music: Male Quartet—Carl Carter, V. C. Shaul, R. I. Shawl, Robert Tibbets

Address: Our Program for Agriculture—C. B. Shuman, President, Illinois Agricultural Association

Our Cover Story . . . 87 Years of Progress

In this month of February, 1949, we celebrate the 130th birthday of a man to whom all of us are greatly indebted. It was here in Illinois that Abraham Lincoln lived from early manhood until he was elected president.



Log cabin at New Salem where Lincoln lived during his early years in Illinois.

Although he left Illinois to assume the highest office in the nation, Lincoln did not forget the needs of the people he had known back home.

In 1862, President Lincoln signed the Morrill Act, which provided for donating public lands to the states to provide colleges for the benefit of agriculture and mechanical arts. It was this law which made possible the founding of our University with the College of Agriculture, and the experiment station.

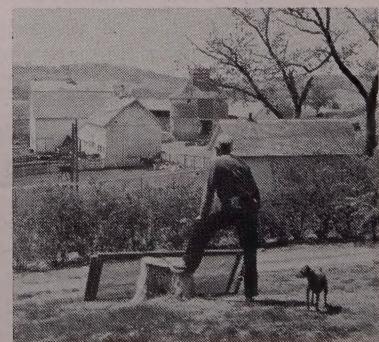
Today as we observe the magnitude

of our great campus, we might wonder whether Lincoln could have dreamed that such an institution as ours could have developed here in his home state, all because his signature put the Morrill Act in the statute books of our nation.

On the other hand, we might look at the home life which Lincoln had in a log cabin when he lived in New Salem as compared with our modern farm homes today. Can we not credit our agricultural colleges with much of the progress which has been made in scientific agriculture during the past three-quarters of a century?

Much of the high standard of living which American farmers enjoy today can be credited to the work of land-grant agricultural colleges.

For the great service of these institutions, let us remember the man who signed the bill that made the founding of these colleges possible. He was once an Illinois farm boy who went to the city to help the folks back home.



Did Lincoln visualize a modern Illinois farmstead like this when he signed the Morrill Act?

Presenting . . .

The University of Illinois

"It's a good thing I only 'busted' one ring. If I had switched two and four in ring three and had seen ring five as the judge saw it, I might have been in the top ten,"—such is the lingo of the boys on our judging teams.

The presentation of our college would be incomplete without paying tribute to our judging teams. To be on a team often requires hundreds of hours of extra preparation, not to mention the forfeiting of an occasional week end of social activities. The fellows are willing to go all-out for the teams because it's well worth any extra time as we'll see later as we meet the members.

Livestock Judging Team

Perhaps there are people who do not know the difference between hams and lambs, but not so among the fellows on the livestock judging team. These are the fellows who can look at a beef animal, hog, sheep, or horse and tell everything about it, including its I.Q.

This has come about to a large extent through the coaching of Fred C. Francis, assistant professor of animal science. In order to have a team place third at the American Royal with only a 24-point spread between high and low man and to place fifth at the International with a 19-point spread, a fine job of coaching must have been done.

The members for this team are picked from fellows who have a livestock background and do well in the spring judging contests. However, the final decision is made on the individual's excellence in the practice judging trips.

During the fall semester, six sessions a week, judging and giving reasons were conducted by Francis. In addition to working with University livestock, practice trips were taken to Purdue, Missouri, Michigan State, and Ohio State universities. Much experience was also gained as they visited seven of the outstanding livestock farms of the Midwest.

Livestock Team Members

Now, let's meet some of these livestock judges who, as seniors, have added another accomplishment to their college careers.

Harry Roland, from DeKalb, was the high man at Kansas City. He plans to enter some phase of the livestock industry. Harry stated, "I'll always remember very distinctly my experience on the judging team. We judged 19 breeds of livestock from oxford sheep to quarter horses."

Another livestock man, Alfred Culver from Athens, was the high individual from Illinois at the International contest. Al wants to become a herdsman.



Above: Livestock Judging Team. Top row, left to right: Fred C. Francis, coach; James A. Rogers, Thomas L. Reedy, Alfred A. Culver. Bottom row: Dale E. Baird, Harry A. Roland, Donald B. Baxter.

Below: Meats Judging Team. Top row, left to right: Robert F. Curran, Henry B. Tanton. Bottom row: F. Dale Laible, Verlin K. Johnson, coach; James A. Robison, Daniel S. Hunt.

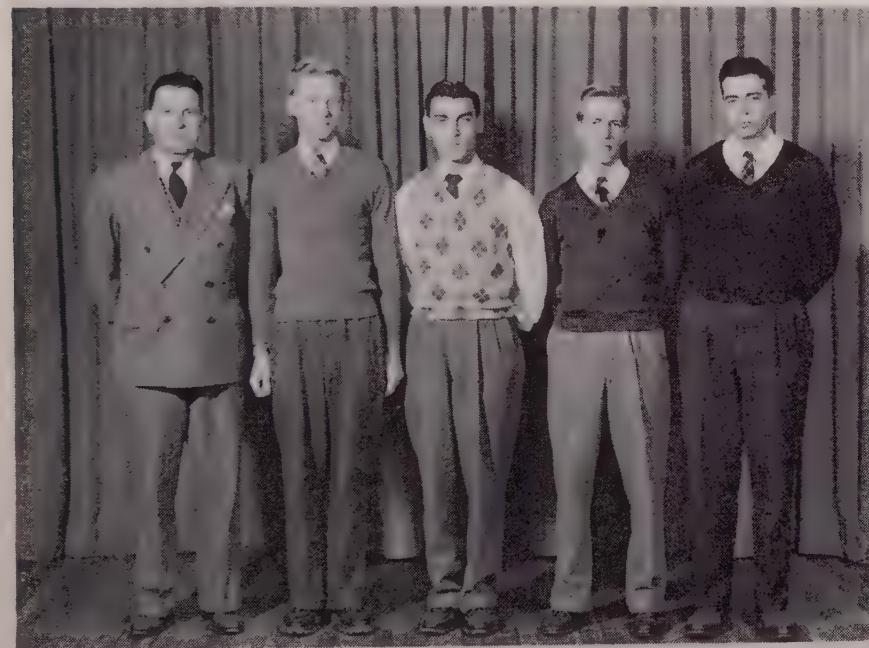
He has raised Berkshire hogs since he was 10 years old. Incidentally, the team won the trophy for having high score on Berkshire barrows. We might expect that Al had some influence on that win.

Jim Rogers from Wyoming, Ill., plans to operate a grain and livestock farm. Jim is chancellor of Morrow chapter of Alpha Zeta. He said, 'I think the members of this team will agree that this

course is one of the highlights of their college life. It takes a lot of hard work to make a team, but it's worth it.'

Tom Reedy, from Lovington, placed fifteenth at the International contest out of 155 competitors. Tom is mainly interested in animal science and farm management. He had previously exercised his judging powers in 4-H work and FFA work. Tom says, 'I was for-

Intercollegiate Judging Teams . . By Russell Lewey



Above: Dairy Cattle Judging Team. Left to right: Jim Whitcomb, E. E. Ormiston, coach; Keith Vogen, Bill Tracy, Marvin Wirtz.

Below: Poultry Judging Team. Left to right: H. M. Scott, coach; Ben Rasmussen, William Combs, William Cadwell, Harry Roland.

tunate enough to make the judging team and work under the capable direction of Coach Francis."

Dale Baird, from Indianola, Ill., has his main interests lying in farm management and livestock judging. Dale has been judging for a number of years and said the experience on the judging team has prepared him to advise breeders on the selection of their livestock, in addi-

tion to making it possible for him to be introduced to the best stock in the Midwest.

Don Baxter, from Rushville, is president of the Hoof and Horn club. Also, he's a member of Alpha Zeta. Don said, "We judged 636 animals and after looking at that many farm quadrupeds, a person develops the art and science of livestock judging—something that is of

major importance in all livestock raising."

Meat Judging Team

There's another group of fellows who scrutinize the porterhouse steaks and eye the rib eyes—the intercollegiate meat judging team, coached by Verlin Johnson, assistant in meats.

Members for this team are selected from students of the meat judging and meat grading course taught by Johnson. In the course, he arranges for out of town field trips about once a week along with work in the University meats laboratory.

The team displayed an excellent showing at the two major contests where they competed. October 19, this team competed with 14 teams at Kansas City and November 30, with 18 teams at the International. However, Johnson said, "The big value of the contest for the members lies in their gain of experience. They learn a lot by just going to the contests no matter what their placing might be."

Meat Team Members

Now, let's see who these pork chop identifiers and carcass graders are:

Dale Laible, a senior from Washburn, tied for second place in the lamb class at Kansas City. Dale's main interest centers around purebred livestock, especially in registered Hereford cattle. Another one of Dale's past achievements is his participation on the livestock judging team of 1947. Dale says that he values very highly the friends he made of the rest of the team mates along with a number of outstanding people in the livestock industry due to his being on the team.

Robison Top Pork Judge

A junior from Pekin is Jim Robison, who carried away first place in the pork class at the International. Jim's modesty was displayed when he said much of the credit goes to Johnson for his excellent coaching. We know both did a fine job. Nevertheless, Jim said that he will remember his experiences on the meat judging team long after he leaves college and forgets chemistry and some of the other required courses.

Henry Tanton, a senior from Cazenovia, plans to have a business of grain and livestock farming. He stated that much benefit came to him by learning what meat packers want and what standards to breed for in livestock.

Dan Hunt, a senior from Deerfield, placed fifth high individual of the International contest in grading beef carcasses. Dan considers his experience on the team to be invaluable in his pro-

(Continued on next page)

JUDGING TEAMS (Continued)

posed vocation in the meat packing industry.

Another team member, Robert Curran, is a senior and comes here from Decatur.

Dairy Cattle Judging Team

Just as important and outstanding are the fellows who find the good and bad points of "Old Bossy," the lactating bovine. These fellows, comprising the dairy cattle judging team, are coached by E. E. Ormiston, professor of dairy production. The fellows all voiced great admiration for their coach.

Membership is open to any student who desires to try for the team. Many candidates quite often are from advanced courses in dairy judging. All members get keys given by the Dairy Production club and expenses paid to the major contests.

After a series of elimination contests, Ormiston selects the members to comprise the team. This group competed at the National Intercollegiate Dairy Cattle Judging contest at Waterloo in October. Twenty-two teams from the United States and one from Canada participated.

Dairy Team Members

Jim Whitecomb, from Burnside, was second high individual at the Waterloo Dairy Cattle congress. Incidentally, Jim has been doing some judging before. He placed sixth in the annual Hoard's dairyman judging contest and captured all-around first prize in the University student dairy judging contest last spring. Jim plans to return to the farm and carry out a program of grain farming along with a good dairy herd.

Another dairy judge who doesn't let moss grow under his feet is Keith Vogen, a senior from Morris. Keith is now president of Alpha Tau Alpha, a professional fraternity for vocational agriculture ma-

jors, and is also a member of Alpha Zeta. Keith is planning to be a vocational agriculture instructor.

A dairy cattle judge for the past 10 years is William Tracy, from Jerseyville. Perhaps the feeling of the members of all the judging teams is voiced very well by William as he says, "I think that every student in the college of agriculture should try for one of the University judging teams. The extra work and time is small in comparison to the benefits received in the end."

Another dairy judge is Marvin Wirtz, who is a junior from McHenry. He plans to return to the farm upon graduation and build a good Holstein herd. He said that he valued very highly his association with boys from all parts of the nation and Canada as being one of the indirect results of being on the team.

Poultry Judging Team

Working on a three-fold basis are the members of the poultry judging team. They judge three phases of the poultry industry—production, breed selection, and market products. The coach, H. M. Scott, professor of poultry science, deserves considerable credit for his excellent coaching of the team.

The members of this team are picked from those taking animal science 207, Selecting, Judging, and Grading Poultry Products. The team competed at the Midwest Intercollegiate Poultry Judging contest in Chicago, November 30. Here, they walked away with fourth place in over-all competition of 16 teams. Individual high placings were also captured by the members.

Poultry Team Members

By getting acquainted with the members we find that it isn't necessary to have a one-track mind on poultry to have success in poultry judging. Ben

Rasmussen, a senior from Somonauk, spent five semesters at Pennsylvania State and then attended Northwestern for one quarter. He is co-editor of the Wesley foundation's bi-weekly here on campus and is active in the "Y." Last summer, Ben worked at the DeKalb Poultry Research farm. That's not all. In 1941, as representing the 4-H clubs, Ben appeared on Quiz Kids program. Two more points of interest—he has a mere 4.9 all-University average; his main interests are genetics and poultry breeding.

Harry Roland, another member of the poultry team, was introduced to us in the livestock team. Apparently he's a versatile judge being able to judge both livestock and poultry.

Another member of the team, William Combs, a junior whose home is at Olney, has his main interest in poultry also. However, he says that table tennis has a second high rating. Apparently this poultry judging runs in the family as Bill's brother, Gerald, was on the Illinois team in 1939 that won at the Intercollegiate contest.

William Cadwell also has a keen eye for poultry judging. He is a senior from Griggsville and considers that much valuable experience and information was derived from being a member of this team.

Dairy Products Judging Team

And now, the "tastiest" team of all, the dairy technology judging team. E. O. Herreid, professor of dairy technology, is the coach of this group. This is Herreid's first year as coach of the team, and he has already produced a fine group of judges.

Here's a chance to cut your food budget while in school. Ice cream, milk, cheese, and butter are the subjects that are judged. And, in arriving at a placing their taste has to be taken into consideration in addition to their appearance, method of packing, and cleanliness.

Nevertheless, this business of ice cream sampling isn't as simple as it may sound. These fellows, with Herreid's direction, devoted many extra hours toward their judging interests. Having attained their peak of perfection, the team went to the National Intercollegiate Judging contest. Twenty-seven teams were entered in this contest that was held in Atlantic City, New Jersey.

To differentiate these four seniors is a difficult task as they seem to have the same interests which is, strangely enough, dairy manufacturing. Nevertheless, Howard Daily comes from Peoria, Charles Hughes and John Soldwedel from Canton, and John Albrecht is from Urbana. John Albrecht is departmental editor for food technology on the Illinois Agriculturist.

There you have them, ladies and gentlemen, the University judging teams of 1948!



Dairy Products Judging Team. Left to right: John Albrecht, Howard Daily, John Soldwedel, Charles Hughes, E. O. Herreid, coach.

Presenting the . . .

DEPARTMENT OF HOME ECONOMICS

Home Economics is for the women who become homemakers or who have business careers.

Bevier hall is the home of home economics. This building was named after Miss Isabel Bevier, the founder of home economics at the University.

Students who receive a Bachelor of Science degree in home ec have a wide range of job opportunities. The graduates are engaged in homemaking, teaching, as dietitians in hospitals and other institutions, in management of cafeterias, dormitories, and hotels; in re-

tailing in the textiles, clothing, and home furnishings field; in research; in extension service; and as nutritionists and consultants of public health agencies.

Women have an interest in the production, processing, sale, and use of food and clothing materials. Through home economics, and the learning of the above processes, women are the leaders, whether they are the homemakers or are in the business field.

Nylon Uses Spread Far and Wide

By Gilda Gleim

"May I use the iron just a second? I must press this ribbon." Haven't you heard about the new nylon ribbon? The wrinkles just fall out. It never wilts or looks droopy like other ribbon. By a certain process of "setting under heat," the nylon ribbon tends to keep its original shape. If nylon is processed in pleats, the pleats will never come out, even after washing.

Have you ever had the skirt of a net formal look as lifeless as cheesecloth? Resin nylon tulle resists moisture like oilcloth. It will always fall into crisp billowy folds.

du Pont Makes First Mineral Fiber

Nylon is a trade name coined by the du Pont company. Their chemists say that nylon is the first man-made textile fiber which has been prepared wholly from raw materials of the mineral kingdom. These raw materials are mainly carbon, hydrogen, oxygen, and nitrogen.

These elements are combined into a molten mass, cooled, and drawn through minute holes. Smooth round filaments varying in length from a fraction of an inch to many hundreds of feet are produced. The filaments may be drawn as fine as a spider's web or as much larger as is required for the specific purpose.

Nylon will withstand hard treatment. Because the filament is smooth; dirt, oil, and rust do not cling to it easily. Its absorbency is so low it may be washed and wiped dry and requires a very short drying period. It needs no ironing since the wrinkles just fall out. Nylon is pre-shrunk and sag-proof. It always looks fresh and crisp and may be dyed beautiful bright colors.

Nylon is light weight and resistant to perspiration and discoloration. Age doesn't weaken the fabric and mildew will not harm it. It also drapes very easily.

Nylon Carpets in the Home

Even the carpets on the floor of the modern home may be nylon. This new

floor covering called Spendante, has a frosty look and feels like freshly sprinkled dew under foot. You may have your choice of beige, green, or grey in one or two tones, in plain or scroll pattern. Nylon carpeting is pre-shrunk and maintains exactly the original dimensions after shampooing. It is also moth resistant.

Fairprene is the trade name of a sheeting that is practically indestructible. Ny-

lon fabric is coated on both sides with neoprene synthetic rubber. This extra strong sheeting was especially developed for the beds of the violent in mental institutions. It resists oil, boiling water, steam and chemical sterilization. It won't crack, peel, or stick and has good wearing qualities.

The greatest use for nylon today is, of course, women's hosiery manufacture.

(Continued on next page)



Nylon carpet with a woven pile of nylon promises longer wearability. Nylon can also be used in making dress and upholstery fabrics.

NYLON (Continued)

The sheerest hose women have ever worn are the nylon ones. They do not bag as rayon hose do and give very excellent wear. Men's hose and underwear are frequently reinforced with nylon filament for longer wear.

The next time you ride in a new car notice the brightly colored woven seat

covers made of nylon. Candalon, the material used, has pile stripes and is easy to slide over. Even some new tires are reinforced with nylon filaments.

One of the most recent developments is knit upholstery fabric. The elasticity of this material is advantageous because of the constant stretch and tension when fitted over a chair or seat. Also knitting

is actually a cheaper process than weaving.

Nylon coated cables will soon be used in all grain elevators. This covering will prevent the cable from causing sparks and possible explosions.

Fishermen will be happy to hear about nylon's sensitivity. With nylon line, it is much easier to detect nibbles. Also, nylon's lack of visibility helps to trick our water friends.

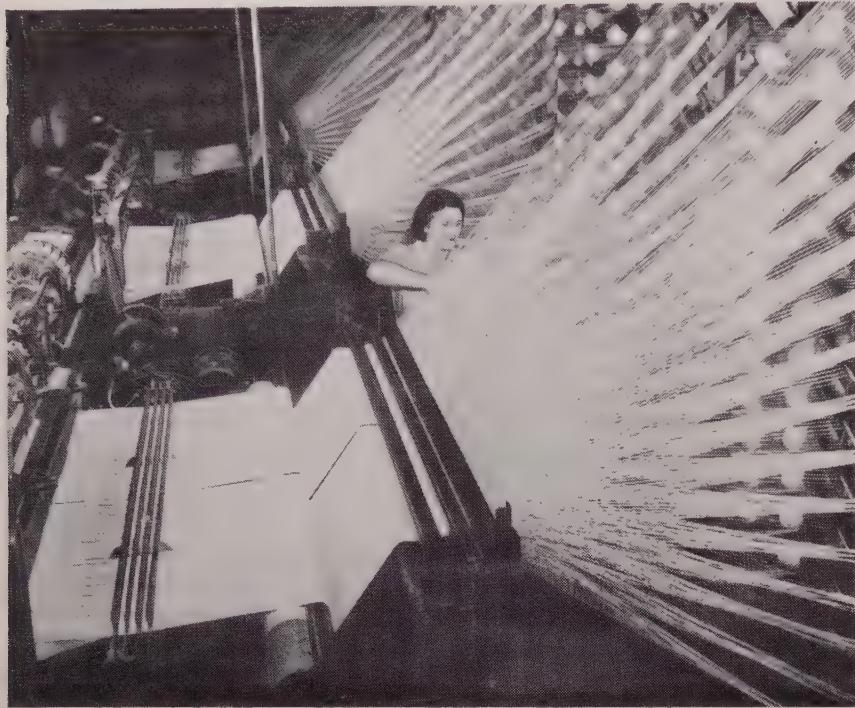
Nylon Serves Many Purposes

Mountain climbers, seamen, fliers, and so forth, have all found an ideal thing in nylon rope. It is even flexible in sub-zero weather. It doesn't swell when wet. It is resistant to sudden jerks and is very strong. A nylon rope two and a half inches in diameter has the same tensile strength of 112,000 pounds as a four and a half inch cable laid manila rope.

Nylon rope is much better than manila rope in fighting fires, too. Natural rope chars and burns readily at 300 degrees F. Nylon doesn't melt until it reaches 482 degrees and it won't support combustion after the igniting source is gone.

Hotel du-Pont in Wilmington, Del., is putting on an extensive program to show the amazing economic values of nylon. Their draperies, curtains, upholstery, and rugs are of the new filament, as well as bedspreads, blankets, sheets, lampshades, and tablecloths. Because nylon has so many outstanding qualities, they plan to prove its value.

This spring nylon will celebrate its tenth birthday. Already it has taken a leading role in the world's industry.



A fan-like pattern of twisted nylon yarn feeds into the cord loom and weaver to make nylon fabrics.

—Photos courtesy DuPont company

TRAINING FOR QUANTITY COOKERY

By Jane Roe

Many people have asked me, "Why do you have to go to college to learn home economics, couldn't your mother teach you that at home?" My answer to these people is, "Yes, my mother can teach me many things at home, but after studying home ec for four years the 'hows' and 'whys' behind the things my mother taught me are clearer."

Institution Management involves much of the same course of study as for a hospital dietitian. The first three years are the hardest. Sometimes it seems like a nightmare wrestling with chemistry, physiology, psychology, bacteriology, economics, sociology, besides the foods and nutrition courses involved.

The senior year involves lectures on organization and management, floor planning, equipment buying and placing, and food requisition and marketing for institutions. For laboratory training the girls prepare food in large quantities and serve it in the cafeteria in Bevier hall. The girls are doing a fine job, judging from the length of the line every

noon and the complimentary comments made.

This course includes a field trip to Chicago to visit such places as Stouffer's restaurant, Field's tea rooms, wholesale food dealers, and other large commercial food serving units and dispensers.

After graduation, institutional management majors can take an internship training in an approved restaurant, tea room, hotel, food service in industry, college residence hall, or wherever her choice of interest lies.

Training in Minnesota

Last summer I spent two months as a trainee at a cafeteria and food shop in Minneapolis. This training involved the same type work that I will do in the rest of my internship. I had the opportunity to work in every preparation and serving unit to turn out food for thousands of people six days a week.

One of the most interesting places I worked was in the bake shop. Here I rolled pie shells, chicken pie tops, and cookies by machine, and baked all the

cakes in revolving ovens (not to mention burning three dozen of the little chocolate party bon-bons).

One little woman in particular showed a deep interest in us and was always asking questions. One day she rushed up to me amidst the heat of an argument and said with appealing sincerity, "Miss Roe, isn't there more iron in an egg with a dark shell than one with a white shell?" I tried not to laugh and explained that the shell's color in no way enhanced the nutritive value of the egg.

This internship training is a fortunate assignment for any future institutional manager. Whether shoving salads to the front of the counter or actually assembling the salad itself, the experience gained is worth while.

After graduation with a bachelor's degree in institutional management, the completion of this internship is one of the training points recommended by the American Dietetic association and the National Restaurant association. This is one field of commercial dietetics in which more girls are needed. To those who face the task with competence, with vision, and with enthusiasm, the prospect is indeed promising.

Presenting the . . .

DEPARTMENT OF AGRICULTURAL ECONOMICS

By Ross Hostetter

The agricultural economics department of the College of Agriculture is subdivided into many divisions. Farm management is the largest of these several divisions in the department. The farm management staff looks at the farm as a whole. They fit the individual farm enterprise together into an efficient operating unit.

Since the Farm Bureau-Farm Management service was organized in 1913 thousands of Illinois farmers have taken advantage of it. The purpose of the service was to help the farmers throughout the state in the planning of their business and to increase their efficiency. The farmers keep a farm account book. At the end of the year they are sent to the University and analyses are made of the farmers' operations.

A new and more general program has just recently been adopted whereby more farmers may take advantage of this service. Meetings are scheduled to

consider various phases of the farmer's business. The farmers will keep farm account books, but they will not be sent to the University for analysis.

Rural sociology is another division within the agricultural economics department. They make studies of schools, churches, and organizations that concern the welfare of all rural people.

Rural cultural programs — plays, music, art and choral groups are promoted by the sociology division. They carry on a large recreational program as a means of getting rural people to work and play together.

Marketing is another division of the department of agricultural economics. The problems involved in the marketing of every commodity that the farmer sells are carefully studied. Reducing costs, increasing efficiency, and finding new outlets for farm products is the primary interest of the marketing division.

Another service performed by the de-

partment for the farmers throughout the state is the information and outlook program. Through this program they try to keep abreast of the factors that affect the prices that the farmers receive for their products.

To keep the farmers throughout the state informed of these factors they put out a weekly review and farm outlook letter. If you want a copy write the College of Agriculture and have them put your name on the mailing list.

Through the information and outlook program annual outlook information can be secured. Other information dealing with feed, livestock, and grain may also be had by writing and asking for it.

The agricultural economics department has a two-fold interest. One is to obtain the greatest amount of material from the land, and other natural resources, at the lowest cost. The other interest that the department has is in the people who own and operate the land. Farmers who farm profitably are more socially useful, not only to themselves, but to the community in which they live.

Do You Have the . . .

Personal Qualities of a Good Farmer?

By Robert Teel

No two farmers in your community carry on their farming operations in exactly the same way. Some seem to be successful in all they undertake while others fail to profit in their farming enterprises. How are the good farmers you have observed different from their unsuccessful neighbors?

A long-time study of this problem by M. L. Mosher, professor of farm management extension, has revealed the qualities or characteristics of the more successful farm operators. These qualities were associated with those farmers most successful in the Farm Bureau-Farm Management service.

Love of Farm Life and Improvement

The good farmer loves farm life and his wife shares that love with him. If you like farming, you will take pride in your work.

The successful farmer provides a certain amount of social life and recreation for his family. By helping them to be happy with their farm life, he becomes a more prosperous farmer.

The good farmer spends more time studying his business than do his less successful neighbors. If you want to keep up with present agricultural conditions you can review farm business analysis reports or attend outlook meetings.

Your presence at Farm and Home

week as well as other meetings like cattle feeders and swine growers days will greatly increase your ability to operate a more efficient enterprise.

The good farmer follows a program

of timeliness and regularity. You know that the regularity of milking time is one of the most essential features in maintaining a productive dairy herd.

(Continued on page 38)



"The good farmer exercises care and patience with animals."

Lockers vs. Home Freezers

By Orville Sauder

The use of frozen food and the numbers of lockers and of home freezers are rapidly increasing.

For example, in 1936 the first locker plant in Illinois was opened. There are now 578 plants with about 275,000 lockers in operation. The prairie state is excelled in number of lockers only by Minnesota and Texas. Every state in the union has some plants operating.

The facts about the number of home freezers are even more astonishing. In 1939, 11,000 were in use in the United States. Today there are about 1,000,000 of them; Illinois has about a tenth of this number. In addition, these units are being made at the present time at the startling rate of 500,000 per year, according to Walter J. Wills, assistant professor of agricultural marketing.

Meat Consumption Studied

Wills and R. C. Ashby, professor of livestock marketing, are directing the research and marketing Project 471. This study deals with effects of using lockers and home freezers on meat consumption and food habits.

The problem is being studied through the media of several questionnaires. These blanks were sent to locker plant operators, locker customers, and home freezer users.

Answers to questionnaires sent to former locker customers indicated that 81 per cent of these farm families have home freezer units. The purchase of a home unit was the most frequent reason listed for giving up lockers.

Most of these former customers originally rented lockers because they needed convenient storage space. Less work than canning was involved, and food was found more palatable when frozen.

Convenience of Home Units

Families who own home units like them quite well. The greatest disadvantage is the fear that power will go off or that the unit will fail mechanically. Most users, however, report no disadvantages.

The most frequent criticism of lockers by farm families is that the distance is too far to the locker. In this respect the home unit has a definite advantage. Locker customers often question whether meat is placed in the right locker, and complain that charges are too high.

Nearly all farm owners of home units have purchased their freezers only recently. More than three-fifths have had them one year or less. Only one-tenth have had them more than two years.

Lockers and home units tend to in-

crease consumption of meat. It has also been noted that users of cold storage units tend to consume larger quantities of beef, but smaller quantities of pork.

That there are many satisfied users both of lockers and of home units is indicated by the fact that each is increasing in number. Some users prefer the home freezer because of its greater convenience in use.

On the other hand, others prefer lockers because they involve no need for large capital outlay, because no worry

about current failure is incurred, and because processing and storage can conveniently be done at the same place. Each of these types of cold storage units is valuable.

This study reveals that more and more people are using frozen food. Frozen meat, fruit, and vegetables are being consumed in increasingly larger amounts. The use of home freezers and of lockers is making available at reasonable rates good quality food to farm families throughout the year.



Turkey, when properly prepared, makes a delicious frozen food product.



THE VERSATILE
Farmall Cub

...the FARMALL SYSTEM

for another million farms

The Farmall System is mechanized farming that has proved its advantages to a million satisfied owners.

The Farmall Cub now makes the Farmall System available to *another* million farms. It's a modern power-package, scaled down for all-job, small-acreage duty—or profitable large-farm utility. It has 20 inches of row clearance; its wheel treads adjust to various row spacings.

The Farmall Cub has 16 matched, quick-change, direct-connected implements. That's why it's an all-purpose, all-season work unit on any diversified farm!

International Harvester builds the Farmall Cub with the power to replace 2 or 3 horses or mules . . . and to do a lot

more, besides. *Because of its range of speeds, it can mow, or cultivate, for example, twice as much acreage per day as the animal power. In addition to pulling drawbar loads, the Farmall Cub operates mounted equipment, belt and power take-off machines, and produces hydraulic power to control implements.*

Attach the Farmall Cub's direct-connected plow, and do 3 to 3½ acres of good plowing in a 10-hour day. Prepare 1½ acres or more of gardenlike seedbed per hour with this versatile tractor and its disk or spring-tooth harrow. Plant or cultivate 10 or 12 acres daily of close-row vegetables or standard-spaced corn or cotton. *Average under 3 quarts of gasoline hourly, on the year's work.*

On the Farmall Cub with Farmall Touch-Control, you ride in comfort—steer with automotive ease—control the Farmall Cub's mounted, quick-change and direct-connected implements by hydraulic power, with a fingertip touch. February is Farmall Cub Month at all IH Dealers.



This modern building symbolizes the expanded service facilities of IH dealers throughout America.

Listen to James Melton on "Harvest of Stars" every Wednesday evening over CBS.

INTERNATIONAL HARVESTER
180 NORTH MICHIGAN AVENUE

CHICAGO 1, ILLINOIS

between this life and the environment. Combining the biological, physical, and chemical techniques to increase and maintain soil productivity is the ultimate goal.

The division of soil experiment fields conducts research on the use of farm-lands by field experiments. The reaction of soils to different management practices in different types of soils at various areas in the state are studied. From these experiments farmers over the state learn what rotations and farm practices to follow.

The department of agronomy, by teaching and extension, makes available to farmers and students the information obtained through scientific research.

Castor Bean Production In Illinois

In the last several years, castor beans have been produced in parts of Illinois and adjoining states due to a reduction of castor oil imports. Although contractors wanted 3,000 acres in Illinois, only 400 were planted, mostly in Fayette, Lawrence, Madison, and Mason counties during 1948.

Here in Illinois, the castor bean plant is an annual. The plants grow from three to eight feet high and produce various colored seeds slightly larger than a kernel of corn. Both the plants and the seed are poisonous to animals.

Castor beans are harvested by hand for the pods do not all ripen at the same time. Combines cannot be sufficiently modified at the present to handle castor beans because the spikes are brittle and are easily knocked off by a slight jar.

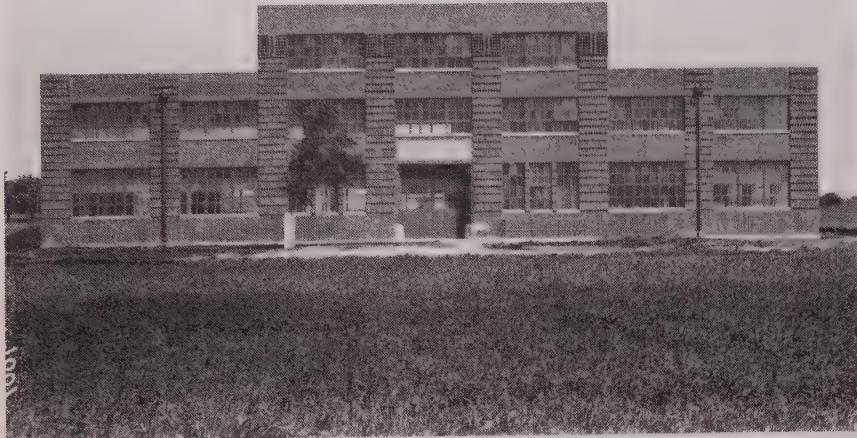
From 50 to 55 per cent of oil can be extracted from the beans. Aside from its well known medicinal purposes, castor oil finds a large use in paint production. The remaining portion of the bean is called castor pomace. It is used as fertilizer high in nitrogen content, and is poisonous.

The fibrous stems of the castor bean plant are sometimes used as a constituent of paper products, and its leaves are occasionally used in production of insecticides.

The development of better varieties of castor beans has been stimulated by increased demands. The price growers receive and the development of harvesting equipment are two of the largest factors in future castor bean production.

At the present time, returns from castor bean seed have well repaid the producer.

Much of the experimental work with castor beans in Illinois has been done by R. O. Weibel, assistant professor of crop production in the department of agronomy.



AGRONOMY FIELD LABORATORY

Presenting the . . .

DEPARTMENT OF AGRONOMY

By Hobart Hinderliter

The agronomy department since its founding in 1899 has been of great service to the farmers of Illinois. Its divisions covering various fields of work and study serve many purposes in furthering scientific agriculture.

The crop production division evaluates new crops and new varieties for production in the state. The areas especially suited for raising these crops are found. Cultural practices and environmental factors necessary for the production of maximum yields are studied. Research includes investigation of new crops, strain and variety adaptation, rate, time, and depth of planting, cultivation, harvesting and many others.

The soil fertility division offers another interesting field of research in the interrelationships of soils, their plant

nutrients, and the crops that grow in them. Recommended fertilizer applications on farm fields are made from these studies and yield increases can be predicted. Many problems such as the relationship of the application of fertilizer to resistance to disease organisms provide many future studies.

The plant breeding division strives to discover and develop improved strains of farm crops and distribute this seed to farmers. New ways of improving plants are studied in the experimental laboratories. Seed producers and farmers are advised how to keep strains pure and produce new strains which are developed.

The soil biology division studies the biological life of the soil, macroscopic and microscopic, and the relationship



Water run-off tests from these plots show the advantages of contour farming.



PINT-SIZED SHADOW

Many a farmer has a pint-sized shadow that tags him all over the farm . . . shrilly repeats his pet words . . . dresses like a tiny twin. Like most little boys, he can't wait to grow up. The thing he wants most in the world is to be a farmer just like his dad.

Old-fashioned farming, with its never ending toil, often shattered this childhood dream —sent the boy off to the city to seek his fortune. Today, it's easier to keep him on the farm. Better crops and improved farming practices have boosted yields and farming profits. Modern John Deere power equipment has taken over much of the muscle work, and

chopped hours from the old dawn-to-dusk work day.

No wonder more and more farm boys are staying with the land—realizing a childhood ambition to follow in their fathers' footsteps. This is a good sign. These young farmers will hasten the fuller mechanization of our agriculture, pioneer new farming practices, and bolster vital food production.

Yes, labor-saving, profit-making farm equipment is helping to raise our most valuable crop—young Americans who love the land. In such hands the future of our agriculture, and of America, will be secure.

John Deere
MOLINE • ILLINOIS

Presenting the . . .

DEPARTMENT OF ANIMAL SCIENCE

By John Linsner and Bob Ingersoll

We Americans can be proud of the high level of our standard of living. In a large measure, animal products are responsible for it. Livestock are necessary to utilize forage, waste land and industrial by-products. They convert these materials into food and other desirable products necessary for our high living standards.

The animal science department (formerly animal husbandry) through its teaching, research, and extension staffs

is aiding the expansion of an animal agriculture necessary to the American way of life.

The department is separated into divisions. The divisions of genetics and physiology are housed in the Animal Genetics building south of Mumford hall. Nutrition and meats divisions laboratories are located in Davenport hall.

The divisions of production cover the selection, feeding, breeding and management of livestock. These hold classes in



UNIVERSITY STOCK PAVILION

the Stock Pavilion and Mumford and Davenport halls. On the University South farm, horse, beef, cattle, swine, sheep, and poultry are maintained for class and experimental work.

New Principles in Swine

Hogs are eating better every day. Yes, hog rations are constantly being improved, thanks to experimental work being carried on at the Illinois and other agricultural experiment stations. Long gone are the days when it was thought that corn alone would grow and fatten hogs.

Improvements in hog rations have been remarkable in recent years. But, constant investigation is continually required to help farmers feed swine more economically and more completely.

Recently, experiments were conducted at the University swine farm to determine the deficiencies of a 20 per cent crude protein ration. This consisted of yellow corn, soybean meal, minerals, and vitamins A and D. It was fed in drylot.

Six B complex vitamins were added in a crystalline form to the basal ration fed one lot of hogs. The crystalline form of the vitamins was used so that measured amounts of the pure vitamin could be fed.

These same vitamins, in addition to folic acid, were added to the ration fed to another lot of hogs. The vitamins, plus 10 per cent dehydrated alfalfa meal, were added to a third lot.

Vitamins Increase Growth Rate

The rations with vitamin alone added, increased the rate of growth of the pigs fed. The alfalfa meal didn't increase the growth rate above the increase caused by the vitamins alone. Pigs receiving the alfalfa meal showed sleeker hair-coats and fewer abnormalities of feet and legs. When retained for breeding, they showed better gestation and lactation performances than the vitamin and folic acid fed swine.

Addition of riboflavin to the basal ration mentioned above served to significantly increase the growth rate of another lot of pigs.

Studies were conducted to determine the value of 2 and 4 per cent of fortified dried whey by-products and 10 per cent dehydrated alfalfa meal for wean-

ling pigs in drylot. When the ration contained 5 per cent meat and bone scraps (20 per cent crude protein in total ration) along with corn, soybean meal, minerals, and vitamin D, the pigs made 30 per cent more rapid daily gains. They ate 14 to 17 per cent less feed per 100 pounds of gain than those fed the basal ration. Pigs fed whey by-products gained slightly faster than those fed alfalfa meal.

Other experiments were conducted to determine the value of semi-solid fish products and fish solubles as protein supplements. Pigs on the basal ration in these experiments failed to show deficiencies caused by the inadequate ration. They had been raised on pasture and the "residual effect" of the pasture provided the vitamins missing from the ration.

Although these fish by-products experiments failed, they demonstrated decisively the value of pastures in swine breeding and feeding programs as sources of vitamins.

The value of dehydrated alfalfa meal,

dried corn distiller's solubles, meat scraps, and sardine condensed fish solubles were tested against one another in another experiment. Various combinations of these were fed as sources of B complex factors for gilts fed in drylot during gestation and lactation. The basal corn-soybean ration fed the gilts contained 5 per cent dehydrated alfalfa meal, minerals, and vitamin D. The basal ration had proven deficient for sows in drylot in a previous experiment.

It was found that 15 per cent of high quality alfalfa meal or a combination of 5 per cent alfalfa meal and 5 per cent distiller's solubles were adequate supplements. These proved as efficient sources of vitamins as rations which carried 5 per cent alfalfa meal with 5 per cent distiller's solubles or 5 per cent alfalfa meal with 2 per cent fish solubles. The test demonstrated that vegetable sources were as efficient as animal sources in supplying vitamins required for growth and fattening.

These experiments stress the importance of pasture as a source of vitamins.

U. OF I. STOCK SHOW AT INTERNATIONAL

Many folks have asked this question—is it fair for large universities to show their livestock in competition with individual breeders?

First, let us look at the situation in this aspect. The University of Illinois does not make a habit of purchasing prize-winning animals so that the school may be covered with glory. Most of the animals shown by the University have been bred and raised here at the farms or are kept as part of an experiment being carried through as a source of information.

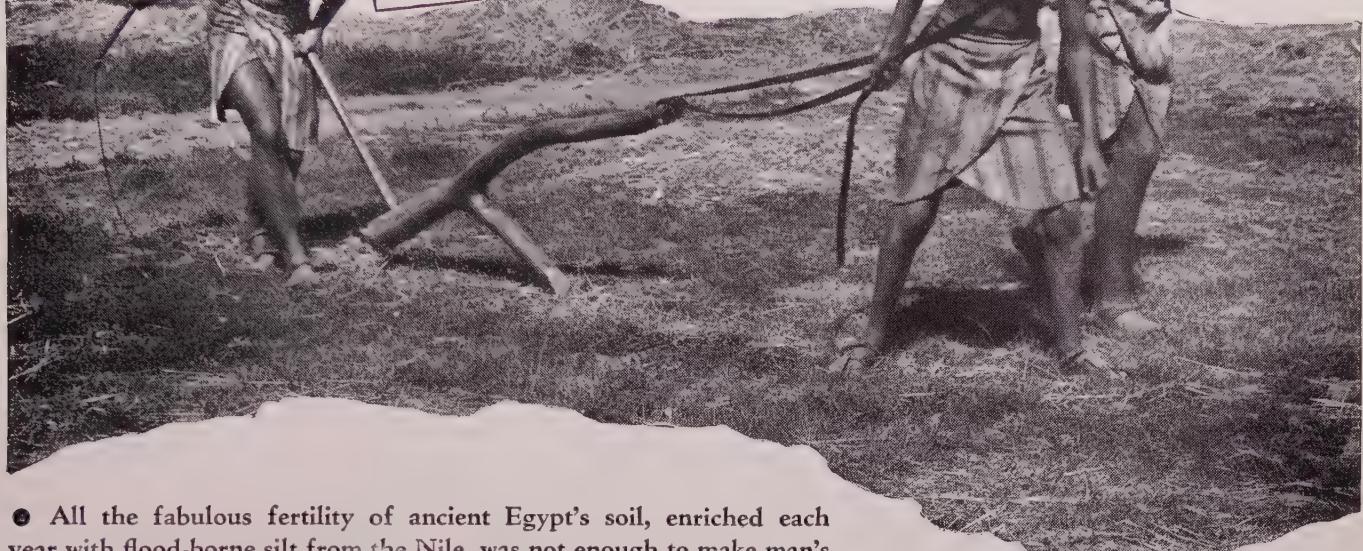
The purpose of any university showing at the International can be explained thus: A large show such as this gives the farmer a chance to find out what the breeders of his particular choice of livestock are selecting in the way of type. The University of Illinois by having

their livestock present accomplish two things. It gives the farmers of Illinois a chance to find out what trend their University is following. The University in turn has actual proof as to the influence it has had on the individual breeder.

This year the University entered only two departments at the International Livestock show. In the beef department their placings were as follows: sixth senior Hereford steer calf, ninth junior Angus steer, ninth Hereford steer herd, and fourteenth Angus steer herd.

In the sheep department they received Champion Suffolk wether, third Hampshire wether, fourth and fifth Hampshire ewe lambs, second Pen of Suffolk ewe lambs, second yearling ram, fifth aged ram. In the wool show they had second Shropshire ewe fleece.

Beasts of Burden ...Fifty Centuries Ago



• All the fabulous fertility of ancient Egypt's soil, enriched each year with flood-borne silt from the Nile, was not enough to make man's living much better than that of animals. He was a slave, not merely to other men, but more to lack of power and implements to multiply his strength as he tried to till the earth. Egypt had seed and soil for high yield per acre, but the *yield per man* was low.

Today, many old-world peasants and oriental coolies get higher yields, figured by the acre, than those of the American farmer. Yet they are poor, while he prospers. He has freedom to use American farm machines, freedom to enjoy what he earns by his high yield per man.

Those freedoms are yours to enjoy, if you preserve them. When you come to choose equipment, or counsel its selection, remember two things about Case machines. One is their capacity, to get big production per man. The other is economy, to leave more earnings above expenses. It comes mainly from ENDURANCE that gives extra years of use from the original investment, cuts down yearly cost of upkeep.

Case Model "VAC" tractor with 2-bottom rear-mounted plow.

CASE



See Fifty Centuries of Farming. Thousands saw it daily for a week during the Wisconsin Centennial Exposition at Milwaukee last summer. Filmed then, this Case pageant of quaint costumes, strange skills, ancient tools and modern machines has been made into a full-color sound movie. Be sure to see it when shown in your community. It will be made available later for meetings sponsored by educational agencies and farmer groups. J. I. Case Co., Educational Division, Racine, Wis.





The dairy production department here at the University of Illinois is the oldest such department in the United States. It was here that the first dairy department was organized in 1896 by W. J. Fraser, professor of dairy production.

Experiments with pastures and pasture management were one of the first projects of the department. Much work is still being done on this problem. The department also carries on many scientific and practical demonstrations and experiments dealing with feeding, breeding, and managing dairy cattle.

Faster Feed Consumption By Bigger Cows

With many dairy farmers considering the milking parlor system, much attention has been focused on the problem of feed consumption. A cow may be in the milking parlor for only a few minutes and consequently will not have enough time to eat her grain.

The following figures show the results obtained from the time trial studies conducted here at the University by K. E. Harshbarger, assistant professor of dairy production. Each of the five major dairy breeds were included in these tests. These figures represent minutes required per pound of grain, hay, and silage consumption.

	Grain	Hay	Silage
Holstein	1.91	6.03	2.21
Brown Swiss	1.51	8.84	2.00
Ayrshire	9.49	2.75
Guernsey	1.91	12.30	3.38
Jersey	2.39	13.54	3.88

The grain was fed while the cows were being milked and the hay and silage was fed after milking. It was necessary to limit the amount of hay to five pounds per feeding so that all of it would be eaten without delay. Grain and silage were fed in usual amounts.

As you can see from the above table, the time required for grain consumption didn't vary as much as it did for hay and silage. Also, grain required the least time for consumption in each breed.

Hay required the longest time to be eaten, ranging from 6.03 to 13.54 minutes per pound. This is more than twice as long for the latter as for the former. It is also the widest margin.

Silage required a slightly longer time than did the grain, varying from 2.21 to 3.88 minutes. Another noticeable result is that as the size of the breed

Presenting the . . .

DEPARTMENT OF DAIRY PRODUCTION

By Lyle Toepke and George Curtiss

The department has grown from a small staff to one of 18 full-time and 5 part-time men engaged in teaching, research, and extension. G. W. Salisbury is the present head of the department. Dairy bacteriology, dairy chemistry, dairy feeding and breeding, and dairy extension make up the four divisions of the department. Offices and laboratories are located in Davenport hall.

The dairy production department owns 200 acres of land and buildings south of the campus. The farm and herd is under the supervision of E. E. Ormiston, professor of dairy production. The dairy farm is one of the most extensive grassland farms in this area. It consists of 150 acres of pasture and lots, and 50

acres of corn and other experimental crops.

The herd consists of 265 dairy animals representing the five major dairy breeds. All animals, except the herd sires and a few others, are placed on experiment from the day they are born until they are sold or die. All of the cows are milked twice daily. The department is also working toward a regular 305-day lactation period instead of the 365-day period.

Some of the cows are used in classroom laboratories for teaching dairy cattle selection and management. Three hundred sixty-nine students, including 33 graduates, were enrolled in dairy production courses the first semester.

decreased, the time for consumption increased. This was especially noticeable in the hay and silage time-trials.

First Annual Calf Sale For Juniors Only

A dairy calf sale, sponsored by the extension service in cooperation with the breed associations and the Vo-Ag Teachers Association, will be held at the University Stock Pavilion on February 26 at 10 a. m. Only boys and girls in 4-H and FFA work may purchase calves. Therefore it is an opportunity that seldom comes their way.

One hundred calves of the five major breeds will be sold at prices which will fit the pockets of these boys and girls. These calves were born between July 1 and November 1, 1948. There will be 20

to 25 Holstein, Brown Swiss, and Guernsey calves sold, 20 Jerseys, and 10 to 15 Ayrshires.

The calves will be carefully selected by the breed associations on a basis of production and type records. Since the breed associations will want to give a good account of themselves, these calves are sure to be good.

Credit for the original idea must be given to the Illinois Purebred Dairy Cattle club and the division of dairy extension here at the University. It is to help club members: not just to sell calves.

In the words of C. S. Rhode, professor of dairy extension, "This sale offers an unusual opportunity for boys and girls in 4-H and FFA to buy quality calves and pay the prices they want to pay. We hope this sale will be an annual event."



LINCOLN AVENUE DAIRY BARNs



NEVER A MILLIONAIRE

"...not for a Million"

They say millionaires don't whistle—and me, I like to whistle. I like the things that make living fun—a good day's work behind me, a good meal, a family.

Take farming, for instance. In my work we have better opportunities today than ever before. Farm Bureau alone offers many fine advantages. Through it I rub shoulders with men and women who are trying always to do a better job of farming. From them I get good and new ideas. Farm Bureau helps me get fair prices in buying and selling through cooperative purchasing and marketing—the best insurance in the world at a saving—legislation that will help maintain fair prices for farm products.

Let millionaires have their millions and their worries. Me, I'm going to spread the word about Farm Bureau, and what farming has done for me.

Illinois
**AGRICULTURAL
ASSOCIATION**

AND 99 COUNTY FARM BUREAUS

Presenting the . . .

DEPARTMENT OF FORESTRY

By Ken Goodrich

Many residents of Illinois, especially those from the central parts, have come to think of their state as open prairie land—and most of the trees as imports to provide shade around the farmstead. To them especially, the fact that Illinois has more than 6,000,000 acres of land adaptable to forestry is a surprising one.

As early as 1868, a year after the University of Illinois was founded, its role

in the state's forestry program was foreseen, when a committee on horticulture from the Board of Trustees recommended the establishment of an experimental forest plantation on University property.

Since then, the forestry extension service has provided landowners and wood users in Illinois a working knowledge of woodland management, reforestation, planting windbreaks, preservative treat-

ment of posts and timber and the use of native lumber on the farm.

The extension program has also reached the youth in 4-H and in high school to insure proper use of our woodlands and their products for generations to come. For those who want to delve further into the interesting subject of forestry, the College of Agriculture offers a two-year pre-forestry curriculum which prepares a student for further study of forestry at some other institution. A course in farm forestry and a survey course in general forestry are open to any interested student enrolled in the University.

The American Elm vs. Phloem Necrosis

By Edward Duvick

A definite threat against the American elm is now at hand. This tree is one of our most valuable shade trees in Illinois, having long graced our cities, villages, and rural areas.

The elm has long been a favorite with most people since it provides an excellent source of shade and is exceptionally long lived. Its appearance is of the desired type for a good, hearty shade tree.

Phloem necrosis is now playing havoc with the elm. The first signs of this disease were found in Columbus, Ohio, approximately eight years ago.

Since that time the disease has spread to Illinois. It has been found in several locations over the southern two-thirds of the state and in one case it has been reported as far north as Peoria.

Disease Symptoms

The symptoms of this disease are few and difficult to find. Since this is a virus disease, the microscope will not detect the evidence of its presence. The most evident symptoms appear in the leaves.

The tree is usually afflicted in the month of July. The leaves turn a yellowish color and begin to droop. Often the leaf folds in the shape of a trough. A few days later, after these changes occur the leaves drop from the branches.

Another method for examining for evidence of infection, is to remove a small strip of bark from the base of the tree. In the diseased tree the bark has a caramel color and smells like wintergreen.

None of these symptoms, however, are proof of the presence of disease. The sure test used by research men for proof is much more painstaking and requires a considerable amount of time. A small piece of bark is removed from the tree which is believed to be infected. It is then grafted to a healthy tree. Observations are recorded and compared to previous results enabling the pathologists to reach a conclusion.

What can be done to stop this destructive disease? J. C. Carter, plant patholo-

gist of the Natural History survey and a group of other plant botanists and research men have been studying the disease and working to find a way and means of counteracting this menace. They have found that the tree usually dies within ten days after the outbreak of infection. They have no immediate cure as internal tree diseases can not be specifically treated in most cases.

Through experiments conducted over the past few years they have found that elms are less susceptible to the disease if they are fertilized. This does not assure the safety of the tree from this disease but does tend to build the resistance higher.

Leaf Hoppers Suspected

The leaf hopper has been identified as the carrier of this disease. A laboratory in Columbus has been working on special spray formulas during the past year.

A DDT spray perfected for use in killing leaf hoppers would be a great aid in controlling further spread of the disease. The infected tree as well as uninfected trees could be sprayed if the proper equipment were at hand.

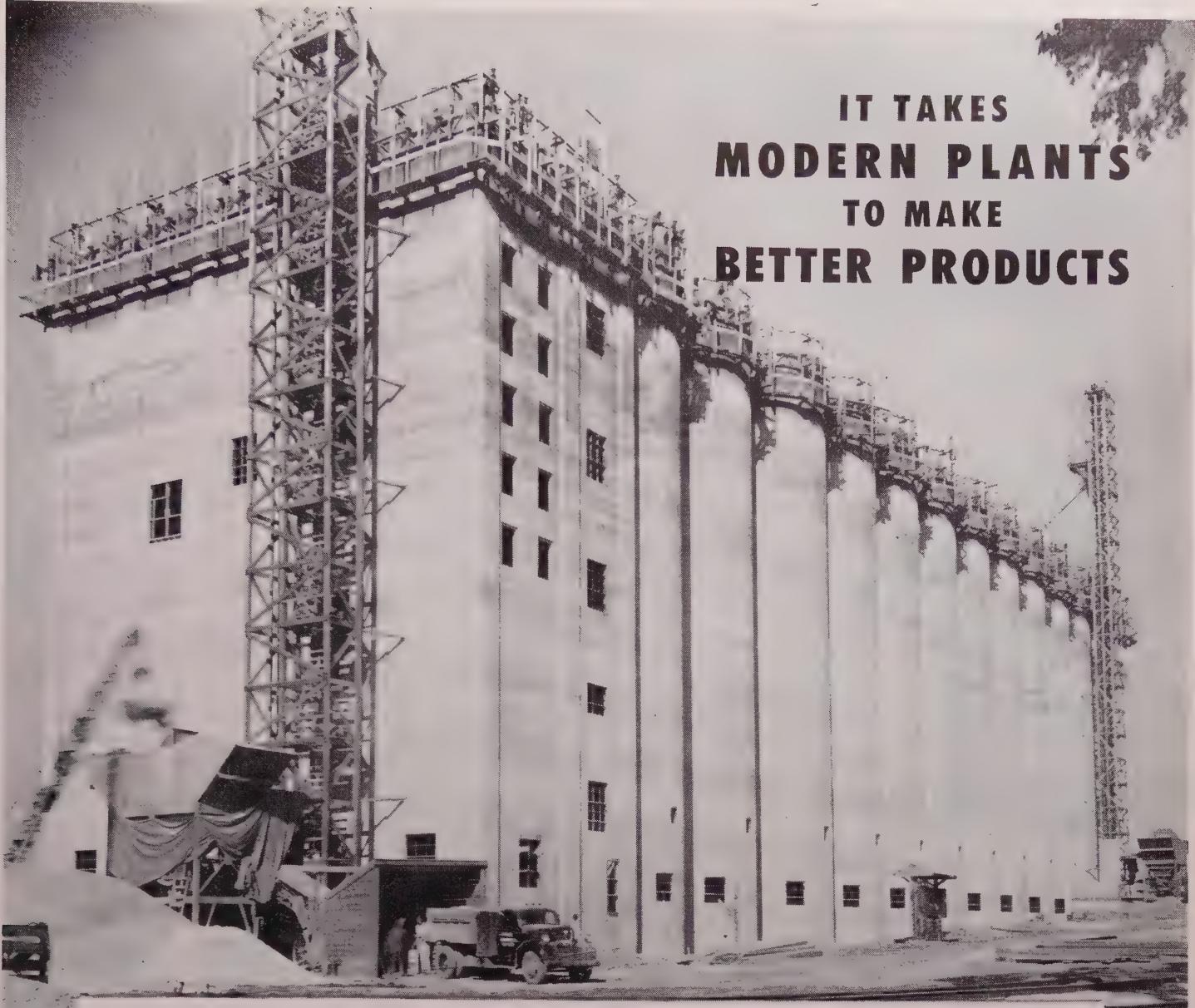
A program designed to aid in prevention and spread of phloem necrosis may be put into effect, pending the outcome of the spray experiments which are now being completed.

This program would be inaugurated by cities and communities which would be able to provide the proper equipment and materials necessary to do the job correctly and thoroughly.

One consolation, however, is the report that the disease is not spreading northward. It is hoped that a practical solution to stop this destruction is near, as few trees are as valuable to us as the American elm.



Valuable elm trees are being killed by this disease.



IT TAKES
MODERN PLANTS
TO MAKE
BETTER PRODUCTS

BLOOMINGTON, ILLINOIS PLANT

of the

RALSTON PURINA COMPANY

This is the newest of 31 Purina plants across the United States and Canada engaged in supplying the farmers of America with profitable returns from their livestock and poultry.

This plant, with elevator capacity of 2,000,000 bushels, will be primarily engaged in the manufacture of soybean meal to be used in Purina Chows.



Presenting the . . .**DEPARTMENT OF FOOD TECHNOLOGY**

By Jack Albrecht

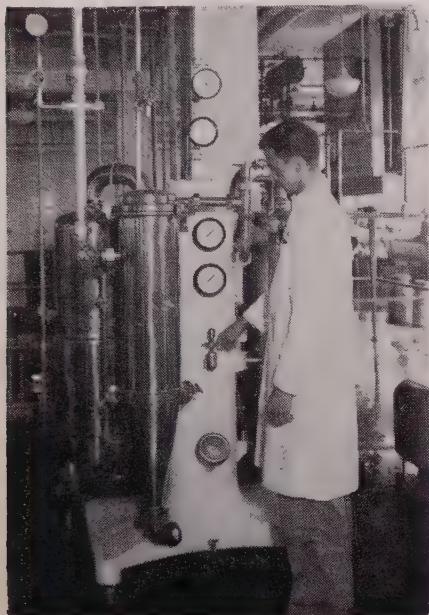
Food technology is the newest department of the College of Agriculture. It has been created to serve the needs of the foods industries of Illinois.

Food technology relates the basic principles of chemistry, physics, microbiology, and engineering to the processing and preservation of foods by such procedures as: freezing, canning, dehydration, fermentation, storage without refrigeration, preservation by chemicals,

corn, soybean, and other cereal crop processing. Animal science will cooperate in the handling and processing of meats, and dairy production with regards to raw material phases in the processing of milk and milk products.

Many of the technical activities, such as refrigeration, control procedures, instrument design, and machinery operation will be carried on with the agricultural engineering department. Assistance of the home economics department will be sought in studies involving human nutrition, quality evaluation, and adaptation of processing methods to the average family's needs (including the development of recipes).

Guidance in matters of supplies and prices of raw materials and problems of distribution of processed foods will involve a close relationship with the

**Dairy Manufacturing Plant**

and other important methods of processing involving such operations as butter and cheese making.

Illinois and surrounding states supply an important part of the nation's food. Food technology can supply many of the answers to the problems of this huge industry. From Chicago's packing plants, to Hooperston's canning plant, Decatur's soybean processing plants, and Argo's corn products plant, trained men are needed for research and plant operation.

The department hopes to play an important part in supplying the trained personnel for these plants and the many confectionary factories, beverage plants, creameries, and locker plants in the state. Many smaller plants will call on the department for answers to their problems. Research will be carried on for the benefit of the many branches of the industry.

Cooperation with Other Departments

The department will work cooperatively with other departments of the college. Work with fruits and vegetables will be carried on with the horticulture department. Agronomy will cooperate on

department of agricultural economics. The program of the department also will involve cooperation with departments outside the College of Agriculture, among which may be included the departments of chemistry, bacteriology, physics, and the engineering groups.

Broad Curriculum

The curriculum for the first two years will be basic. The required University courses, plus courses in mathematics, chemistry, bacteriology, and physics will take up the first two years. Courses in processing operation, microbiology of food products, chemistry of the food products, and management procedures will be given in the last two years of the course. As facilities avail themselves it is hoped to give advanced degrees in food technology.

At present about 50 students are enrolled in the dairy technology division of the department and seven students are enrolled in general food technology.

A new building to house the food processing machinery, provide office space for the staff, classrooms, and other necessary facilities is in the planning stage.

Presenting the . . .**Department of Agricultural Engineering**

By Jim Stokes

The working goal of the department of agricultural engineering is improvement of operating efficiency and higher standards of living for the farmer. The department is made up of four divisions: soil and water conservation, power and machinery, farm structures and housing, and rural electrification. Plans are now being made for a division in engineering elements of food technology. The working goal in each of these fields is being carried out with the help of extension specialists.

These specialists are aiding farmers through their contacts with farm advisers and local groups all over Illinois. The distribution of 18,000 blueprints of all types of farm buildings and dwellings last year is only one example of the work the department of agricultural engineering is accomplishing by means of their link with the farmer, the extension specialist.

Illinois farmers have probably come to know the department best through its numerous short courses. Among these have been courses in tractor maintenance and operation, rural electrification, and conferences for drainage engineers and building contractors. A course in spray control of crop diseases was given this January.

Among the present facilities of the department of agricultural engineering is its well-equipped tractor and farm machinery laboratory. Also included are its laboratories and equipment for the study

of corn drying methods and seed separation in seed control. The department is also making plans for laboratories for soil and water engineering and spray control equipment and methods of distribution.

An appropriation of \$220,000 has recently been suggested by the committee on building appropriations for improvement of the agricultural engineering building. This would make possible a better program in graduate work and more extensive work in research projects such as soil and water conservation, and dairy engineering.

In its 15-year growth from a faculty of 10 to its present staff of 40 including sub-professional men and assistants, the department of agricultural engineering has been one of the important sources of information for the progressive Illinois farmer. In the future it plans to be of even greater assistance.

**A New Self-Propelled Corn Picker**

THROUGHOUT Corn-Growing U.S.A.



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PROGRAM PROVIDES ASSURANCE
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OF CORN"

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agricultural leaders and farm-
ers upon request.
Write for your copy.

FUNK BROS. SEED CO.

BLOOMINGTON, ILLINOIS

AND ASSOCIATED GROWERS

Presenting the . . .

DEPARTMENT OF HORTICULTURE

By Carroll Doll

The department of horticulture of the University is comprised of divisions in pomology, plant breeding, olericulture, floriculture, and plant pathology. Collectively, these divisions deal with fruit growing, spraying, plant propagation, evolution of horticultural plants, and horticultural experiments.

Pomology and plant pathology have their offices in the Horticulture Field laboratory. The laboratory, which includes cold storage rooms, constant tem-

perature chambers, and chemical, physiological, pathological, and histological laboratories, adjoins the experimental and varietal plantings which furnish material for study.

Information and instruction related to vegetable crops come from the Vegetable Crops building, the adjoining greenhouses and several acres of land which grow the principal vegetable crops and illustrate garden operations.

Floriculture utilizes 10 glass houses

and a service building. Here, collections of flowers and plants represent the forms used in commercial and decorative work. Illustrative material is provided in the ornamental gardens while the forest tree plantation facilitates advancement in plant materials.

Offices of plant breeding are in the Vegetable Crops building. However, much of their work is carried on at the Horticulture Field laboratory in addition to the vegetable crops facilities.

In addition to the facilities here on the campus, plant breeding operates an experimental field at Olney, and vegetable crops maintains the Cook County Experiment station at Des Plaines.

Happier Popping Days for You

Does your popcorn pop completely? Does it give a quality product? If not, ask yourself these questions. Is the moisture content between 13.5 and 14 per cent? Do you have enough heat? Is there a coating of grease around the corn?

If unsatisfactory results are obtained after trying the recommendations, a new type of popcorn should be tried—hybrids.

Hybrids give higher yields and quality. Popping is nearly complete with increases of 25 to 30 times the amount of unpopped corn. However, while enjoying the new product a review of the development of the hybrid popcorn may give more appreciation of its advantages.

A record planting of 274,000 acres of popcorn in 12 leading states was made in 1945. This was an increase of three times the acreage harvested from 1935 to 1943. In 1944, the acreage harvested was more than double the average of the nine preceding years.

Despite this rapid expansion, not enough popcorn was available in the fall and winter to supply the public demand. Stores and small vendors could not buy corn to keep their stands in operation.

Consumption Increases

A marked increase in the consumption of popcorn has become obvious. The increase in its use in confections, popped and seasoned corn available for immediate consumption, and the development of higher quality due to hybrids are the reasons for this increased demand.

The development of these hybrids is much more complex than with field corn because popcorn is grown primarily for human consumption. As advancements are made in hybrid production, the quality and yield will increase.

USDA Starts Hybrid Development

Early steps in the development of hybrid popcorn were taken by the United

States department of agriculture. Approximately 60 varieties were used to start selections. These varieties were grouped into the well known types of South American, Jap or Hulless, Pearl, White Rice, and Tom Thumb.

Experiments were later transferred to Kansas, but the droughts of the early '30s proved disastrous. This work was revived at Purdue university.

In 1935, Minnesota Experiment station introduced an excellent commercial hybrid popcorn. However, it was limited in adaptation to the northern areas where it was produced.

Purdue began their work on hybrid by choosing one variety of the Pearl type and one of the South American type. Following a period of selection, selfing, and testing of the inbreds, they developed a number of single and three-way crosses.

Hybrids Come to Illinois

Twenty of these hybrids were included in trials along with open-pollinated checks here at the Illinois Experiment station in 1941. Practically all of the hybrids produced yields significantly higher than yields of corresponding check plots.

Breeding of hybrid popcorn here at the University started in 1937. Development of a hulless popcorn has been the goal. In the spring of that year, Mr. Malcomb Chapman of Farmer City gave B. L. Weaver, professor of vegetable crops, two ears of hulless popcorn. Mr. Chapman claimed to have been raising this variety for 25 years.

When planted here at the experiment station, it proved to be larger, more vigorous, later in maturity, and much higher in yield than the other varieties. However, popping tests gave only fair quality and average volume.

In 1939, popping tests were made on several hundred ears selected at ran-

dom. Residues of the 32 best ears were planted in 1940. Selfing was begun and continued each subsequent year.

Seed Released for Sale

In 1944, after selection by individual ear testing, this corn was released to the Cornelius Seed company of St. Louis under the name of Illinois Hulless. Under single crossing, it had given yields of 63.34 bushels per acre as compared with an average of 45.6 bushels of open-pollinated lines. The popping tests ranged from 25.2 to 30 times its original volume.

Twenty-five single crosses were tested in 1947 and all but one cross outyielded the open-pollinated checks. There was an average increase of 49.1 per cent in yield and a 28 volume average in popping.

Forty-five hybrids were planted in test plots in 1948. However, with the very favorable growing conditions, the margin of hybrid yields over open-pollinated yields was small.

Although the inbreds are now in the ninth generation, the Experiment station is not completely satisfied with the yield, popping ability, and quality in the hulless popcorn produced so far. Another year or two will enable them to produce the hybrid that will satisfy both the grower and the consumer.





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SPRING SALE!

SATURDAY
April 2, 1949

Illinois State Fairgrounds
Springfield, Illinois

TOP HERD AND FARM BULLS AND CHOICE
BRED AND OPEN HEIFERS WILL BE OFFERED

DON'T MISS THIS GREAT OCCASION



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ERNEST PAINTER, *Secretary*
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Vocational Agriculture Instructors May Obtain a History of Polled
Herefords for Classroom Use by Writing the Secretary

TOMORROW'S CATTLE TODAY!



One-room country schools like this are becoming fewer every year as the people of Illinois realize the advantage of the community unit district.

Improved Education for Illinois Children

By Merwyn Lindstrom

The extensive school consolidation which has been taking place in recent years is of great interest to rural folks.

Although some consolidation began 10 years ago, consolidation has reached its peak in the last 3 years. There are now 6,166 school districts in Illinois as compared to 11,957 in 1938. This is a decrease of 51.5 per cent in 10 years.

Has this consolidation been necessary? Two and one-half people in Illinois are saying yes to every one that says no at the polls.

What is wrong with the present school system? The faults are numerous, too numerous to all be mentioned here. But a few bear mentioning.

For one thing, the small school districts lack the money to do a good job of teaching. There is little instruction beyond the 3 Rs. To meet modern demands of society it is necessary that our high school students have training in the vocation in which they are interested. A girl who wishes to do office work or a boy who wishes to study medicine must have more than the three Rs to be properly prepared to find a job or do further study in college.

The small schools usually have insufficient funds to hire good teachers. The teachers which they ordinarily do hire are insufficiently trained. Most have no more than two years of college training; many only one, and some have no train-

ing beyond high school.

The costs of operating a small school are excessive for the facilities that are available. Also, the cost per pupil is high.

Community Unit District Best

What type of reorganization is best for our rural school districts? The type put into operation most recently is the community unit district. The Illinois legislature has passed a law which has encouraged the establishment of this type of district.

Under this law, a community unit school district may be established from a contiguous and compact territory. The state gives additional aid to a district of this type.

A unit district includes both high and elementary schools. It usually provides for more than one school or attendance center. There may be a senior high school, one or more junior high schools, and as many elementary schools as are needed. These schools are all operated under one school board.

What are the advantages of community unit districts? One is the greater economy which can be realized through operating on a large scale. The costs per pupil in attendance will be greatly reduced.

Better teachers will be hired and they will have to teach fewer subjects and grades. They can do a better job in

teaching one subject. Also, the inequalities which exist between the salaries of grade and high school teachers will be done away with.

After all, the child's first teachings will effect the child's ability to grasp the teachings of higher grades. Thus the caliber of grade teachers will be raised to the position where they ought to be.

Larger Selection of Courses

With the larger school districts will come more equipment and a larger selection of courses than is possible in the small school. Movie projectors and laboratory equipment are too costly for the smaller districts to obtain.

The consolidated unit district will provide a coordinated program which starts at the first grade and ends at the twelfth. Courses and subjects will not be duplicated, and the student may choose a general curriculum which he wishes to follow.

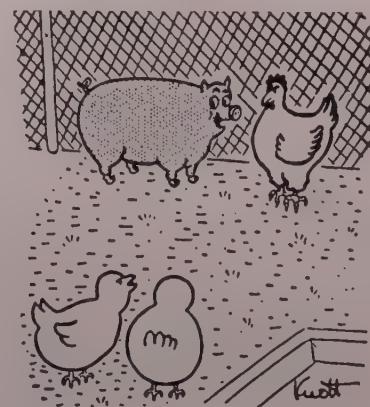
There are other administrative advantages too numerous to elaborate upon: one school policy, one set of educational objectives, one tax rate, and fewer students dropping school after the eighth grade.

People: Obstacle to Consolidation

There is one main obstacle in the way of even more consolidation: the people. Fear of loss of control of their children, adverse town influence on children, sentimental attachments to local schools, possible loss of prestige by present directors, and fear of too little representation of farmers on new school boards all seem to be real dangers of consolidation to farm people.

In the consolidation which has taken place to date, these objections have failed to materialize as real dangers to the farm families. Any other faults which consolidated schools may have are grossly outweighed by the advantages which consolidation offers.

Yes, we are entering a new era in school administration and organization. At long last we are cutting the number of school districts to a number which allows for efficiency and provides better teachers, equipment, and courses. At last we have begun to see the light.



"I told you that pig would squeal on us."

Start CULTIVATING

That "HIDDEN" 80 Acres

ON YOUR FARM

WITHOUT buying a single acre

WITHOUT a single new building

WITHOUT a large outlay for
expensive farm equipment

Income from farms in 1947 was at an all-time high. But there are just so many acres of productive land. The price of this land has increased tremendously. However, on almost every farm, there is an opportunity to derive extra income equivalent to farming an additional 80 acres through Honeggers' scientific poultry and egg production methods.

It has been proven from farm account books kept in 1947 by the Farm Management Service under the supervision of the University of Illinois that by utilizing the 4 factors to the right, a flock of 480 hens equals 80 acres of land in its usual crop rotation.



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For the past 20 years Honeggers have been experimenting, developing and showing their customers and friends how to increase farm profits by a scientific program which includes better breeding, better feeding, better management and better marketing of their poultry and egg production. Beyond a doubt, Honeggers' methods work! What this program has done for others it will do for you.

Ask any Honegger representative for complete details. He will be happy to accommodate you. . . Or write for additional information to



HONEGGER'S & COMPANY, Inc.
FORREST, ILLINOIS

New Lab Has Best Equipment

By Gilda Gleim

The home economics graduate of the University of Illinois will soon have had experience with the very best of modern kitchen equipment. Only recently, two smaller rooms in Bevier hall have been joined and in the near future will be equipped to make a more efficient laboratory.

The room now is L-shaped with four large windows on the north side and two on the south side. Removal of a partition has improved the ventilation and lighting.

The whole room will be painted a blue-green. Linoleum will cover the floor. At the ends of the cupboards along the walls of the room, colorful whatnots will add gaiety to the attractive picture.

Seven Small Kitchens

Each of seven equipment units will be made to resemble a small kitchen for the use of two or three girls at one time. Besides these seven working units, there will be a broom closet, storage space along some of the walls, and two refrigerators. Space has been left in the plans for a dishwasher, a freezer, and a towel drying unit.

In five of the units, the stove and part of the work space are across from the sink. Noiseless, stainless steel cabinets fill in to give a parallel kitchen arrangement. Two of the units are L-shaped and have wooden cupboards so the students may use each type.

The five parallel units have cast iron sinks and linoleum covered working space. The other two units have steel sinks and plastic covered working space.

The full sized, and apartment stoves are part gas and part electric. The work space beside each stove will have a stainless steel insert on which to set hot pans. Students will rotate working in the units so they may use each different kind of equipment.

The main feature of these kitchens is their convenience and utility. The sinks are double bowed with swinging faucets and spray attachments. Some of the sinks have a garbage can hooked on the inside of one of the doors. The other door has space for the storage of cleaning equipment. A towel rack slides out when the doors are open.

Sliding and Revolving Shelves

In the cupboards there are sliding shelves and divided drawers. Many of the cupboards and drawers are lined with linoleum. There is a file arrangement so that flat pans and covers may be stored on end and easily reached. Flour and sugar are put in a specific place. In the corners of the L-shaped kitchens are "lazy susans" or a revolving system of shelves.

One of the base cabinets will have a linoleum covered board which can be pulled out to make a table. In some of the units a shelf is planned to hold an electric mixer which can be lifted up similar to that for a typewriter. A few of the cupboards will have cup racks and step-up shelves. The motto seems to be "a place for everything and everything in its place."

Besides the overhead lighting, the wall cupboards will have fluorescent lights underneath to illuminate the working space. Some of the walls over the stove will be lined with stainless steel so they may be easily cleaned.

Several sets of tables and chairs with plastic tops will be in the center of the room. Diets may be set up on these tables or meals may be served. Linens and dishes of varied types will be available so the students may learn efficient selection.

Outlets and storage space has been planned for the use of electrical equipment such as toasters, waffle irons, roast-

ers, and mixers with attachments to shred, slice, shell peas, etc.

The two L-shaped units will have a portable table to be used for demonstrations. Plans are to have a big mirror supported on the table to reflect the work to those observing. This will be particularly valuable to use for demonstrations to larger groups.

The department hopes to be able to equip the lab with utensils made of different materials to give the students an opportunity to discover the properties of each.

Lee Somers Forecasts . . .

Farm and home visits by radio! The visitor—Mr. Lee A. Somers, assistant professor of vegetable crops and garden extension.

His voice is very familiar because of his numerous radio broadcasts. These include the Better Gardens program on WILL, Crops and Market Reports on stations WLS and WMAQ, and 24 transcriptions for smaller stations throughout the state.

Mr. Somers began this extensive program in 1929. It was shortly after becoming extension specialist that he appeared on the WLS Dinner Bell program. A second appearance was made a short time later. This time he forgot to follow the script. This so pleased Arthur Page, director of the Dinner Bell hour, that he told Mr. Somers to ad lib at liberty.

The first Farm Hour on WILL included a part by Mr. Somers. So successful was this part that it gradually grew to be a feature of the program.

World War II and the Victory Gardens gave the Better Gardens program a tremendous boost. The practical information needed by the growers was efficiently given through radio broadcasts.

Mr. Somers' background for vegetable crops came from a vegetable farm in Michigan. It was on this farm that he worked until entering service in World War I.

In 1920 he began his studies at the University of Illinois. He received his bachelor of science degree in 1925 and his master of science degree in 1927. He served as an instructor for four years, working also in extension. His appointment to specialist of vegetable crops was made in September of 1929.

In addition to his many radio broadcasts, Mr. Somers has been instrumental in the formation and the development of the extension schools and the many meetings for the vegetable growers of the state.

His plans for 1949 are to include information of fruits and flowers as well as the complete vegetable information in his broadcasts.



Bevier Hall—Home Economics Headquarters

WELCOME TO THE
Forty-Eighth Annual Farm and Home Week
 UNIVERSITY OF ILLINOIS



MEET YOUR FRIENDS

at the

ANNUAL GRAIN SHOW

Tuesday, Wednesday, and Thursday
 600 Davenport Hall

and the

ANNUAL BANQUET

Wednesday Evening, February 2
 Urbana-Lincoln Hotel

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For Top Egg Production—

- HY-LINE CHICKS "BRED LIKE HYBRID CORN"

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HATCHES TWICE EACH WEEK, ALL YEAR 'ROUND

CORN BELT HATCHERIES, Inc.

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 BELVIDERE
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LIBERTYVILLE
 GALESBURG
 PEORIA

(All in Illinois)

BE SECURE WITH A SOUND LEASE

Illinois has tenant farmers on nearly one-half of its land. More than one-third still farm their land under the old-fashion verbal agreement, according to H. C. M. Case, head of the department of agricultural economics.

"Farming is a business and should be treated as a business," says Case. "The written lease can be a guiding star for the landowner and the tenant. It can protect them both in disputes and provide a basis for making minor changes when the need arises. It will give assurance that both parties will consider all phases of the contract."

Improvement Provisions' Necessary

Case pointed out that the modern scale of farming makes it necessary for leases to contain provisions for upkeep and improvement of farm lands. "Much of Illinois' land is being farmed to death, just because farm owners and tenants can't get together on who's going to plan crop rotations or furnish the fertilizers."

According to Case, many of the farmers who have leases today find them so complicated in wording that they bring about more disputes than they settle. "Leases can be simply stated and still legal," he continued. "They are legal as

long as they fulfill the following requirements:

1. Give an accurate description of the property leased; have a definite and agreed term over which the lease extends.

2. Set an agreed rental price and time and place that the payment is to be made.

3. Have the signatures of the parties involved.

Make Long Term Leases

"If you're sure you have a good man, let him know in the lease that he can stay for a period of years," said Case. "And state clearly that there will be a definite, fair division of the income and expenses."

Case recommends the crop-share-cash lease for Illinois farmers. In this lease the tenant gives the landlord a share of the grain crops and cash rent for the pasture land. Under this lease, both the landlord and tenant are interested in seeing that the land produces its best.

It's especially good for the young tenant, who can start farming with little capital, since the crops pay for a good share of the rent. Both the landlord and tenant share the risk of crop failure, whereas in strictly cash rental, the risk falls entirely on the tenant's shoulders.

Peck System Rules All

The peck system of order in your poultry flock may largely determine whether you get top laying production.

Roosters and hens have a social order in the flock. That is the word received from S. F. Ridlen, extension specialist at the University of Illinois College of Agriculture.

He said while reviewing the findings of A. M. Guhl that "each hen has a rank in the flock." The social position of a bird can be determined by the number of birds she pecks and how many peck her. The top hen pecks all others in the flock while the bottom bird pecks none.

This social caste may have an effect on production. The queen will have rule of the feeder space and may as a result lay more eggs than those of lower rank.

The social outcasts may not get enough to eat and not lay at top level. To get largest production there must be enough feeder space to reduce pecking and chasing from the feeder.

The roosters have their pecking order also. However, the roosters usually dominate the hens.

Even at roosting time the order still prevails. By watching hens it was found that they usually roost in the same place night after night. If they don't roost in the same place, they roost close by.

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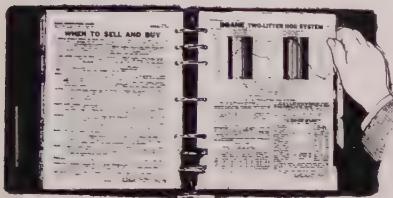
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MISCHIEF MAKER

Save Sewing Time . . .

By Betty Braden

Have you begun to plan what you will wear in the Easter parade, April 17? Why not plan to make at least a part of your outfit? Now is the time to plan your garment and start to make it so you won't have that last minute rush to put in the hem the evening before.

How often do we consider the importance of cutting each piece on the exact straight of the material and then handling and caring for each piece so

that it retains its original shape? The first step is to place the pattern on the material so that the right side of the material is folded inside and the straight of goods markings are exactly parallel to the selvages of the material.

Tracing Wheel for Marking

After the garment has been correctly cut out, the pieces must be carefully marked. Dressmaker's tracing paper and a tracing wheel can be used for most fabrics.

Place the first sheet of tracing paper, tracing side up, on the table under the part of the material which is to be marked. Place the second piece of tracing paper, tracing side down, between the material and the pattern. Use a ruler as a guide for the tracing wheel and make connecting lines on the printed marks or through the perforations to mark darts, seam allowances, etc. A small cross can be used to indicate the end of the markings, such as at the point of a dart.

Prevent Stretching

When the garment has been marked, remove the pattern and stay stitch the parts which tend to stretch while working on them. Although loosely woven fabrics stretch most, even closely woven fabrics may stretch enough to result in a droopy looking garment.

Stay stitching is done by stitching with the machine through a single thickness of fabric to hold the grain in its correct location. Stitch one-eighth inch from the seam line between the seam

line and the edge of the material. It is used on off-grain seams.

At the neckline, the stitching is begun at each shoulder and stitched toward the center front. The shoulders are stitched toward the armhole; then around the armhole to the underarm seam. The underarm placket may be stayed by stitching toward the waistline. The top of the skirt is stitched from the side in toward the center front.

Stitching Gauge Makes Even Seams

A helpful gadget in obtaining accuracy is the stitching gauge. It is used on the sewing machine to insure even width of seams. If you do not have one, you can make one by scotch taping a piece of cardboard to your machine so that the side of the cardboard is a seam's width away from the needle.

Here's Nuts for You

Identification of all species of fruits and nuts is one of the popular services of the horticulture department. Many residents of the state send specimens to identify, and in return learn the origin, species, or variety of the fruit or nut.

Another service of value to both home owners and commercial orchardists is that of continuous and complete testing of varieties. A typical example in this field is the Persian walnut (so-called English walnut). Seeds of this nut were imported from Russia and the seedlings grown here. Results indicate that these Persian walnuts may be grown in central Illinois.

Another phase of the varietal testing is the publication of the variety lists. All the common fruits of Illinois, as well as varieties of black walnuts, pecans, filberts, hickory-pecan hybrids, and chestnuts are included.

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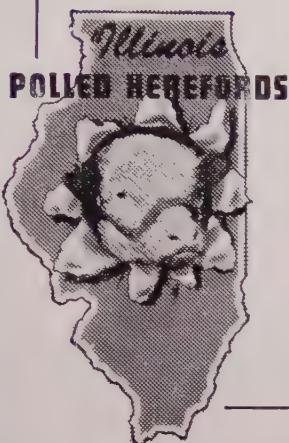
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"INVALID COOKERY" DAYS ARE GONE

By Ellen Strecker

Hospital dietetics is a relatively new profession that applies the science of nutrition to the food we eat.

When the need for the application of the science of nutrition first became apparent, the courses of study modestly began as "domestic science." Today adequate preparation for work as a dietitian calls for a bachelor's degree in hospital dietetics from a fully accredited college or university.

The course although generously sprinkled with the sciences of chemistry, physiology, bacteriology, also includes many liberal art subjects such as sociology, English literature, and psychology, that all together give the student a very rounded education.

In addition to the four years in college, the American Dietetic Association recommends a fifth year of directed experience in an approved internship for

training student dieticians. Just as the young graduate of the medical college must serve his internship, so must the prospective dietitian serve as a student dietitian before accepting a position in her own right.

The Beginning of Internship

Dietetic internship is 12 months in length. Its aim is to offer practical experience and training in the various phases of hospital dietetics. Applicants must be 21 to 30 years of age and in good health.

Interns are provided with room and board plus additional compensation. Several hours of class work are scheduled each week which includes courses in the administration of the hospital dietary department, sanitation, diet therapy, medical and pediatric lectures, and observation of certain classes given to student nurses.

Most of the intern's time, however, is spent in practical experience in the various units of the hospital. Some of the hospitals in the Middle West that offer internships are Barnes hospital in St. Louis, University hospital in Ann Arbor, John Whitcomb Riley hospital in Indianapolis, and Cook County hospital in Chicago.

No Longer Just Invalid Cookery

Since scientific nutrition was first applied professionally in the field of corrective diet, dieticians were first concerned largely with "invalid cookery." They served in hospital organizations primarily as teachers, employed to teach nurses how to prepare the food then believed to be necessary for sick people. As the "newer knowledge of nutrition" became better understood and more widely accepted, the dietitian's sphere of activity in the hospital has widened in scope.



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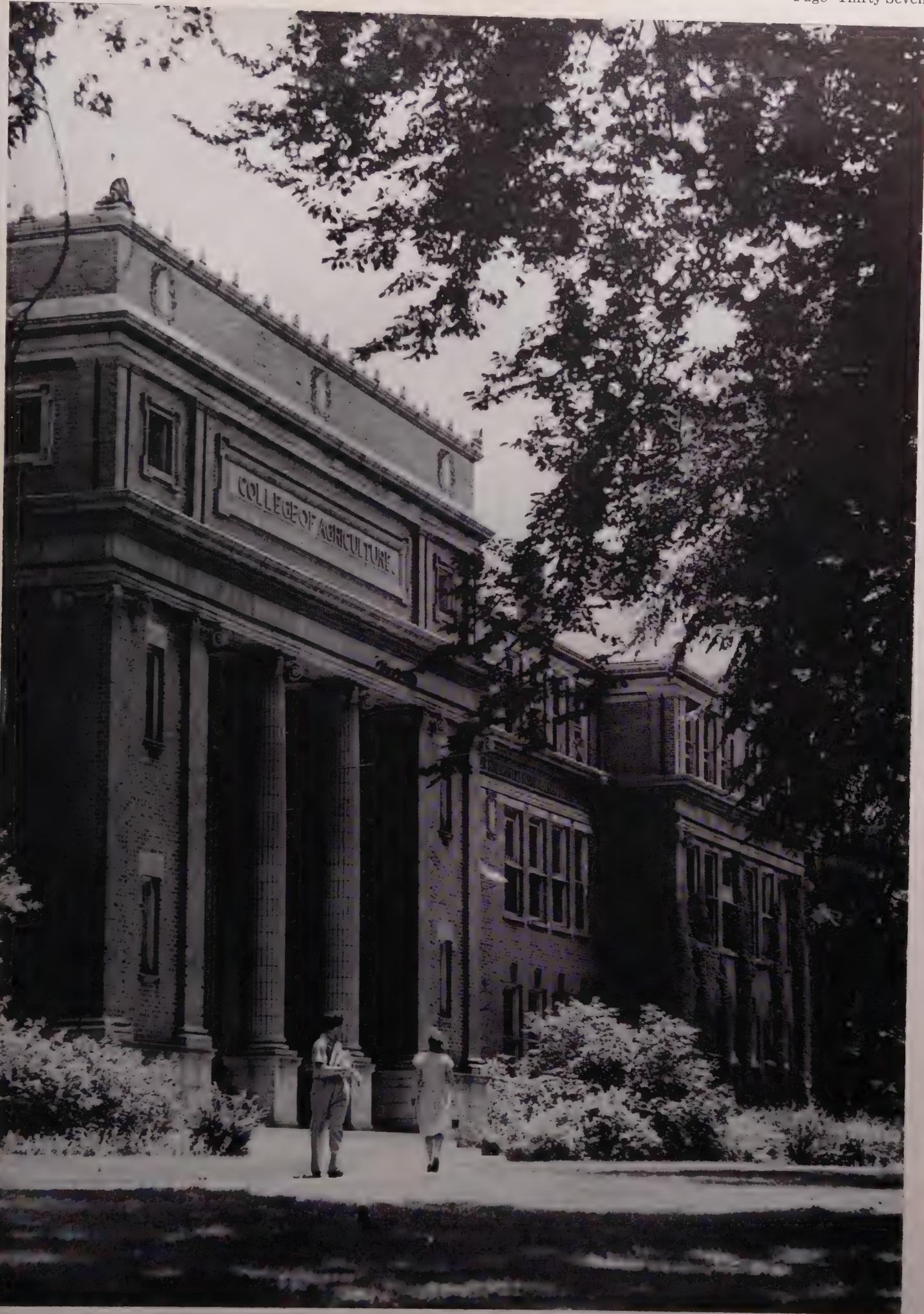
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Personal Qualities . . .

(Continued from page 13)

Also regularity in care of equipment is required for maximum life and efficiency.

The good farmer is thorough in performing the various kinds of farm work. Lack of thoroughness often will lead to disappointment, discouragement, disillusionment, and failure. Abraham Lincoln has said that the most essential quality of a successful man is thoroughness.

Perseverance with Chosen Plans

A good farmer realizes that to maintain high earnings over a long period of time he must decide on a general plan

of crop and livestock production and stay with it through the years.

Practice is necessary to become efficient in the production of crops or livestock. A decision early in life on a definite program of livestock and crop production is desired. This is more likely to attain profitability than constantly changing from one kind of crop or livestock system to another.

Kindliness, Cleanliness, and Neatness

The good farmer exercises care and patience with animals. Mosher reports that the more successful livestock farmers were the kindly men who were quiet and gentle in the handling of their ani-

imals. Your patience when working with pregnant and young animals will be amply rewarded in later profits. Beef cattle which are fed in a quiet and gentle way make the most profitable gains.

The good farmer believes that sanitation is a first in the control of livestock diseases. The McLean county system of swine sanitation is an illustration of the advantages of this policy.

Did you realize that neatness of the farmstead is a companion characteristic with love of farm life, proper care of land, livestock, and machinery, and the control of weeds, insects, and diseases?

Good Neighborliness and Thrift

The most successful farmers are usually good neighbors. The modern version of the old saying, "Cast your bread upon the water and after many days it will come back to you," might well say "Be a good neighbor at all times and in times of trouble your neighbors will help you."

The good farmer with good farming practices can provide that type of good farm family living essential to security and happiness. His earnings do not go to pay highly inflated prices for land, to provide expensive buildings, or machinery beyond the needs of the farm. They cannot be used for gambling, drinking, and carousing at the expense of the family welfare.

If you spend your present high income for extravagant living, it will not be available for good living during periods of low earnings for education of children, or old age security.

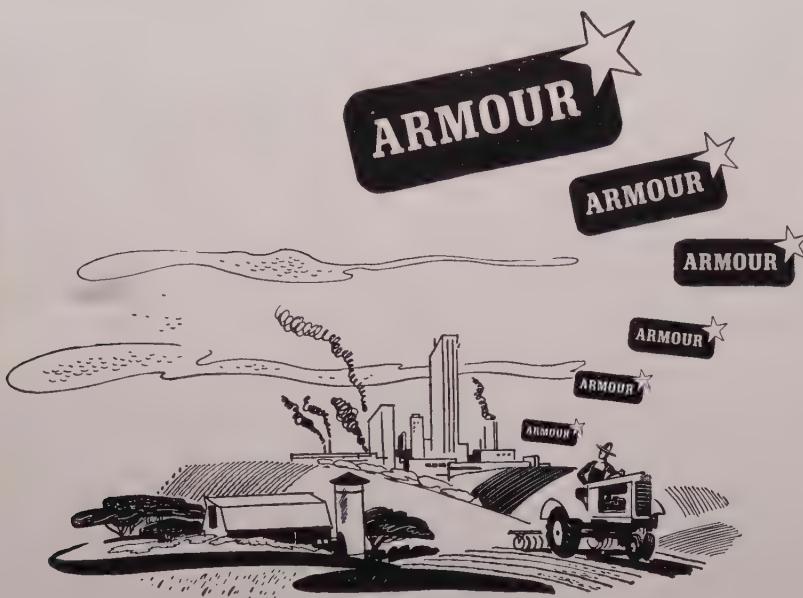
Will to Do a Job

The good farmers have the will to do a job. The kind of work or quality of your product will be dependent upon your will to do the job in the best way you know how.

These are the qualities that Mosher has found to be associated with the best farmers in the analysis of farm management records.

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Peach Growers Threatened By Virus-X Disease

Virus X-disease of peach is a relatively new disease and is present in northern Illinois on chokecherries. It is a serious threat to owners of peach trees because it kills the trees in about two years. Characteristic symptoms are yellow-red leaves with partial dropping of leaves. The terminal leaves always remain on the tree.

This disease was first found in Illinois in 1939. A preliminary survey that year indicated diseased chokecherries in the counties of Winnebago, McHenry, Cook, Boone, Ogle, and DuPage.

A comprehensive survey was made in 1940. In that survey, infected chokecherries were also found in Jo Daviess, Stephenson, Carroll, Kendall, and Will counties.

A brief inspection in 1946 and again in 1948 revealed a slight southward movement of the disease. Chokecherries

having the disease were found in Mercer, Rock Island, Knox, and Peoria counties.

Because of the absence of chokecherries in southern Illinois, the commercial peach areas may be safe. However, since virus diseases generally occur on a wide group of plants, it may spread south. At the present, insufficient information about the spread of the virus prevents the development of any practical control measure.

Save Milking Time

The rate of milk removal from dairy cows is constant until approximately 90 per cent of the milk is removed from the udder. This end point of maximum removal is reached between three and five minutes, depending on the individual cow, according to the report of K. E. Harshbarger, assistant professor of dairy production.

This study of milk removal was performed to determine whether or not the

pressure inside the udder affected the rate of removal. Does the great pressure developed cause the milk to be forced out at a rapid rate at the beginning of the milking process and then to gradually taper off? Or is the pressure constant through the entire process? On the basis of this experiment, the latter seems to be the answer.

There were 102 observations made on 51 cows in conducting this test. Time was counted from when the actual milk flow began. Unless the udder is washed with a warm solution one minute before the milking process begins, to stimulate the "let down" of the milk, there will be a slight delay in the flow of milk.

Shortly after the three to five minute period is reached and milk flow ceases, the milker should be removed from the cow.



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